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## ORIGINAL LECTURES.

### THE RELATIONS OF PUERPERAL ECLAMPSIA TO BRIGHT'S DISEASE.

*A Clinical Lecture, delivered at the Philadelphia Hospital.*

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(Reported by William H. Morrison, M.D.)

GENTLEMEN: The patient before us has a brief antecedent history, which is as follows: She is twenty-four years of age, and has been a domestic. Her father died of tubercular phthisis, but her mother is living and in good health. She had one brother, who is said to have died of "œdema of the brain." She herself always enjoyed good health until eight weeks ago, which was four weeks before her confinement. About that time, there occurred dropsy of the face, hands, and legs; and with this a frequent desire to pass water. These symptoms continued until the morning of her confinement, when suddenly her eyesight began to fail, and in a short time she became completely blind. She remembers nothing that occurred after this, but her mother told her that she had convulsions during labor. The patient was unconscious from early Friday morning until late Saturday night—in all, about thirty-six hours.

Some of you will at once recognize that these convulsions were what are commonly termed puerperal convulsions. Examination of her urine when she was admitted to the hospital, showed that she had large albuminuria, and that casts of the uriniferous tubules were present in the urine. We therefore concluded that while she had puerperal convulsions, she also had uræmic convulsions; and it is one of the purposes of the lecture to-day, besides discussing the renal condition from which she is convalescing, to consider the relations between that condition and puerperal convulsions.

The symptoms mentioned were the only ones presented on admission. Whatever of dropsy there may have been, had entirely disappeared. The blindness had also gone; but the urine contained albumen in considerable quantity, while the microscope revealed hyaline casts, in some of which there was a small quantity of granular matter. There is, however, nothing distinctive in the presence of hyaline casts, as these are found in every form of renal disease. The examination of the urine, therefore, did not afford us the means of making a differential diagnosis. Hence we were compelled to have recourse to the history of the case; and from what we know of the relations of puerperal convulsions to the symptoms which she has had, I conclude that the patient was suffering with acute Bright's disease, from which she is now convalescent, and that while she had puerperal convulsions she had also uræmic convulsions.

What are the facts which justify this conclusion? In the first place, we have the fact, substantiated by numerous observations, that the majority of cases of

puerperal convulsions, associated with albuminuria, are due to acute nephritis. I am aware that this view is not accepted by everyone, but I have taken much pains to examine the evidence bearing upon this point, and I feel perfectly satisfied that the large majority of cases of puerperal convulsions associated with albuminuria and dropsy, are the result of acute nephritis. I do not pretend to say that it is impossible to have puerperal convulsions which are independent of Bright's disease. On the contrary, I have myself seen such cases. In these, there has been no albuminuria or dropsy previous to confinement, but the patient has been a primipara, the labor tedious, and the nervous system has been in a state of tension in consequence of anxiety and pain for perhaps twenty-four hours. I have seen puerperal convulsions immediately after delivery in such cases, in which I attributed the convulsion to a sort of explosion in a nervous system which has been in a state of prolonged high tension. Such cases always get well, and they seldom have more than one or two convulsions. Where, however, the convulsions are due to Bright's disease, they are not limited to one or two, but they continue to recur, as in the present instance, for perhaps twenty-four hours, and unless prompt treatment is instituted, the patient is very likely to die. Such a case was our own patient. When we first saw her, she had passed through the ordeal of the convulsions and had reached that stage where the distinctive varieties of casts had disappeared. There were no longer epithelial casts, or blood casts, but simply hyaline casts. It takes a long time for the uriniferous tubules to throw off all the casts formed within them, and for some time after all activity in the inflammatory process has subsided, casts may continue to be discharged. The last to disappear are hyaline casts, which are those produced by the slightest derangements in the circulation of the kidney. In this case the quantity of albumen is rapidly decreasing.

As I do not want to be understood as saying there cannot be puerperal convulsions without concurrent Bright's disease, so I do not wish to be regarded as claiming that dropsical swelling cannot be present without Bright's disease. It may be as the result of simple pressure by the gravid uterus; but where there are dropsy and large albuminuria, especially if associated with sudden blindness and convulsions, we may rest pretty secure in the belief that we are dealing with a case of acute nephritis. These cases of acute nephritis, as a rule, get well very rapidly after delivery, because they are, in a measure, really brought about by the puerperal state, and with the removal of the cause disappears the most important obstacle to rapid recovery.

Why does Bright's disease result from the pregnant state? The answer may not be altogether satisfactory, but it is certain that the condition involves the accumulation in the blood of a large amount of effete and therefore poisonous matter. We have, in fact, the same agencies operating as in many cases of Bright's disease

from other causes. It is well known that acute Bright's disease is a very common sequel of scarlet fever. It is here due to the presence in the blood either of the scarlet fever poison itself, or of effete matter which is retained in consequence of the inactivity of the skin; or both of these sources of poison may be combined. In the puerperal state we have likewise conditions favoring the accumulation of effete matters. The woman is at once the eliminator of her own excretions and those of the child, the retention of which is the essential cause of the Bright's disease. The obstruction to the circulation, due to the compression of the vessels by the gravid uterus, doubtless adds to this, but it is of itself insufficient to cause it.

There are two of the symptoms presented by this patient to which I desire to refer. The first is the blindness, and the second the convulsions. This woman, as we have heard, became blind previous to the occurrence of the convulsions. What is the cause of this loss of vision? It is known that there is a form of Bright's disease in which there are organic changes in the retina, technically termed albuminuric retinitis. These changes are most frequently associated with chronically contracted kidney. The defect of vision under such circumstances comes on slowly, but blindness, with which this patient suffered, came on suddenly, and is of a very different character. It occurs suddenly, and often disappears as suddenly as it came. Such blindness evidently cannot be due to structural change in the retina. I do not know that we are sure as to its precise cause, but the most rational explanation is that which attributes it to the same cause that produces the uræmic convulsions—that is, an accumulation of urea and allied substances in the bloodvessels of the brain, affecting the centre of vision, and thus blotting out, for the time being, the responsiveness of that centre to the stimulus to which it usually responds. The convulsions are caused in the same way. The nerve cells are irritated by the presence of these products, and the response comes in the shape of a convulsion.

We have in these facts the key to the treatment. Unquestionably, the most efficient treatment of puerperal convulsions is bloodletting, for by bloodletting we draw from the system the agent which is the most important factor in the production of uræmia. But it may be said by some that venesection is not recommended in the treatment of the convulsions of acute Bright's disease. Why then should it be used in puerperal cases, if the same essential causes prevail in both?

I believe, however, that it is a mistake not to treat the convulsions of non-puerperal Bright's disease in the same manner, and that if bleeding were more common, the results would be more satisfactory. I do not hesitate to advise you to bleed in the convulsions of acute Bright's disease. No harm can follow the removal of from eight to sixteen ounces of blood from an adult patient, so that if it does no good, it does no harm. You must not, however, expect equal success, because there is still an important difference in the conditions. In the instance of renal disease accompanying the puerperal state, the termination of this state not only removes the remote cause of the disease, but the disease itself is usually less advanced, and the chances for recovery may thus be increased.

Afterward, or coincidently with this measure, anaesthetics are often of great service, and the patient is kept, with great advantage, more or less thoroughly under the influence of chloroform or ether, in order to keep off the convulsion. This is not always necessary, for in many cases chloral answers every purpose. There is no condition in which chloral can be relied on more confidently, in connection with venesection, than in puerperal convulsions, and in the convulsions of Bright's disease. It must be given in full doses. I usually give an adult one drachm of chloral by enema. It is not worth while to give a smaller dose. The dose named may be repeated; but in the majority of cases one dose is sufficient. Chloral has the advantage over anaesthetics, in that it is possible to judge accurately of the condition of the patient. When a patient is under chloroform or ether, it is impossible to note the changes in mental condition by which almost alone we are to judge of improvement. If bloodletting and chloral are not sufficient, chloroform or ether must be resorted to. Chloroform, dangerous as it is in ordinary surgical operations, appears to be harmless in puerperal conditions.

I do not know how this patient was treated before she was brought to the hospital. Active treatment in every case is not absolutely necessary—I have known cases to get well without treatment; but this is running a great risk. Given a case of acute Bright's disease, not too far advanced, with the cause removed, and the immediate danger of the convulsions prevented, I do not know that it is necessary to pursue any specially active treatment. Rest in bed, with an easily assimilable diet, as one of milk, is generally all-sufficient. This woman is gradually improving, and will, I have no doubt, be as well as ever in a short time.

There are two other grades of complication of Bright's with pregnancy to which I desire to call attention, both of which are far more dangerous than that of which we have been speaking. The first is a puerperal case with Bright's disease, where the renal affection is not the immediate result of the puerperal condition, but where it has previously existed; for although these cases occasionally get well, the mortality is much higher than in those cases of which we have been speaking.

There is a second class of cases in which, in my experience, the prognosis is invariably fatal. A girl of eighteen or twenty, with Bright's disease, who subsequently marries, is almost certain to die in her first confinement. This is an exceedingly important practical point with reference to the question of marriage of girls with Bright's disease. If a woman has had two or three children, and then acquires Bright's disease, although the condition is more dangerous than where the renal condition comes on during pregnancy, she still has a chance of getting as near well as she was before she became pregnant. The probabilities are, however, that the kidneys are left a little more damaged than they were previous to pregnancy. The renal disease is better than it was during pregnancy, but a little worse than it was before pregnancy. It is not so with the primipara who had Bright's disease before marriage. Her marriage-bell is her death-knell. In a case like the one before us, however, where there probably was no affection of the kidneys previous to pregnancy, there is every reason to believe that recovery will be complete.

## ORIGINAL ARTICLES.

## CHRONIC DISEASE OF THE SHOULDER.

CASES WHICH SHOW THE INEFFICIENCY OF PASSIVE MOTION WITH OR WITHOUT AN ANÆSTHETIC AS A MEANS OF RELIEVING FIBROUS ANKYLOSIS.<sup>1</sup>

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At a late meeting of the New York Orthopedic Society, now a Section of the Academy of Medicine, Dr. L. W. Hubbard presented a case in which he had performed excision for ostitis at this joint, and in the excellent paper which he read, the surgical aspects of the disease were fully discussed, yet very little was said concerning the treatment by forcibly breaking up the adhesions, and the results that follow such a course of treatment. During my service as interne at the Forty-second Street Hospital, there came under my observation, both in the indoor and outdoor departments, a number of cases of what seemed to be chronic ostitis of the shoulder in children. One of the duties I have imposed upon myself is that I should some day collect the histories of these cases, trace the patients, and learn the final results. I find myself with this duty still unfulfilled, and my only excuse is the one which we are so prone to plead, "lack of time." While a hospital interne I thought nothing of taking a list of the names of the patients and tramping over the city in search of their last residence, but since leaving the hospital my views on this subject have materially changed. I recall, however, a few of the cases to which I have referred, and I have no difficulty in noting the points to which my attention was then directed.

A child from five to eight years of age is brought to the outdoor department, the mother complaining of the shoulder being stiff and painful when passive or active motion is employed. The patient is well nourished, and gives the ordinary family history. A closer investigation elicits a tuberculous history in father's or mother's family, or an acquired diathesis in the child's history, a diathesis then called strumous, now called tuberculous. The history of the disability of the joint will extend over a few months or a year, perhaps. A fall, or a trauma of some kind is found, but sometimes no such cause can be found. On examination, there is found an appreciable degree of atrophy, a marked change in the contour of the parts, a drooping of the shoulder, the member hanging close to the side, a decided tenderness on manipulating the joint, a locking of the articulation by reflex spasm of the muscles when any passive motion is attempted, and an elevation of temperature readily perceived by placing the hand on the shoulder. The case differs from an ostitis of the hip or the knee in the absence of the severe exacerbations of pain and reflex muscular spasm. It is true that there is a history of exacerbations, yet they are not severe. The patient comes under treatment, which consists of a liniment, an

alterative tonic, and passive motion twice a day. If the child comes into the hospital, the passive motion is made by one of the medical attendants quite regularly. The rule is to find the child shrink more and more as time goes on, especially if the physician be at all impressed with the importance of making vigorous movements of the shoulder. If the child be treated in the outdoor department this duty is entrusted to the mother, who begins quite zealously, but who soon becomes lax in the performance of her duty, and after awhile the patient ceases to attend. I have seen just such cases remain in the hospital for more than a year, and at the time of leaving the institution it was difficult to note any decided improvement. I have seen such cases a year or two subsequently, and the signs of disease were still present.

I speak not in disparagement of the hospital when I record this experience. These patients, from all I can learn, get the same treatment wherever they go. The time for the employment of passive motion is thought to be at hand, because the stiffness has continued so long. The weight of the arm is considered as an efficient means of making the extension, and the absence of exacerbations for a long period is construed into signs negative of the existence of disease. Nearly all surgical writers, and not a few authorities on orthopedic topics, caution us against permitting a joint to become stiff. Fixation, continued too long, is regarded by these writers as the cause of the ankylosis.

Gross (vol. ii. p. 1021) says:

"Ankylosis of the shoulder-joint may be caused by injury . . . eventuating in effusion of plastic matter. Such cases generally admit of cure, simply by breaking up the morbid adhesions under an anæsthetic, and then instituting a regular system of passive motion, aided by the use of the douche, sorbefacient liniments, and dry friction."

Johnstone (Holmes's *System of Surgery*, "Diseases of Joints," vol. iii. p. 280) says:

"Instead of applying the force employed simply in one direction, by attempting *at once* to straighten the limb—the first process is to move the joint in every sense, so as to render it as supple as possible. . . . When . . . any inflammatory symptoms produced by the force employed have subsided, it is time, if the case is one which allows of any hope of success, to adopt such measures as may tend to develop renewed mobility of the joints."

Bradford (same reference) says:

"Forcible motion is useful not only in joints absolutely stiff from fibrous adhesion, but also where some motion is possible, limited by single or partial adhesions."

The two quotations just made relate to joints in general, but Dr. Bradford, the American editor, speaking of peri-arthritis, on page 298, says:

"Forcible motion breaks down adhesions, and usually effects a complete cure, but sometimes two or three attempts are necessary before complete recovery."

Entertaining such views myself at the time Case III. came under my observation, I acted accordingly.

<sup>1</sup> Read at the February meeting of the Orthopedic Section of the New York Academy of Medicine.



Barwell (*Diseases of the Joints*, second edition, p. 359, Wood's Library), speaking of the shoulder, says, "the surgeon must trust to force only in order to reëstablish the movements of the joint."

Noble Smith (*Surgery of Deformities*, pp. 144, 145), after stating that *brisement forcè* requires great discrimination and judgment, gives Brodhurst's rules for its employment, and adds:

"Subsequent treatment by passive motion, friction, hot-air baths, or other emollients, may be necessary before the normal condition of the joint can be completely restored."

He further adds:

"In many bad cases free motion is never completely restored, and there is often a tendency to refixation."

Haward (*A Treatise on Orthopedic Surgery*, pp. 83-85) cautions against the too early employment of force in scrofulous joints, but urges its employment in stiff joints from other causes.

Sir James Paget (*Clinical Lectures and Essays*, first edition, p. 97) says:

"that too long rest is by far the most frequent cause of delayed recovery after injuries of joints in nearly all persons who are not of scrofulous constitutions. . . . Mere long rest stiffens them and makes them oversensitive, cold douches and elastic restraints and pressures make them worse, and nothing remedies them but movements, whether forced or voluntary."

Sayre (*Orthopedic Surgery*, and lectures published in different journals) advocates *brisement forcè* in selected cases, but relies more on attention to details of after-treatment for good results. Six or eight days of rest and traction elapse before daily passive movements are begun.

Brodhurst is the most ardent advocate, and in reading his book and his reports of results one somehow feels that they are too universally good to be true. For a history, however, of the treatment of ankylosis by this method his brochure on "Ankylosis" can be profitably consulted. And so on, I might enumerate author after author who counsels this mode of treatment.

Hugh Owen Thomas, of Liverpool, stands out conspicuously as opposed to the employment of force in the attempt to reëstablish motion in stiff joints. See his work on *The Hip, Knee, and Ankle*.

CASE I. *False ankylosis from osteitis (?), many years' duration; active and passive motion, emollients, and electricity; these means failing, forcible movements under ether; subsequent passive motion: restiffening of shoulder; seems to improve when not treated.*—The patient came under my observation on February 9, 1881. She was then fourteen years of age and complained of a dragging pain about the right shoulder, and an inability to get the hand to the head. She stated that she had suffered much since the September preceding, but that from childhood the arm had been "weak." With the experience which I have just recorded, I naturally inferred that this was "one of those cases" and that I now had opportunity of noting a late result. Any movement of the shoulder which I attempted caused pain and reflex spasm. The normal contour was absent and there was an atrophy of one inch over the shoulder, one and a quarter inches at the middle of the arm, three-quarters of an inch over the elbow, and the limb was one inch shorter than its fellow. With slight effort she was able to abduct the arm only

four inches from the side. This distance could be increased by the employment of a little force, but the scapula moved with the arm. She continued under treatment until the latter part of March of the same year, the treatment consisting of poulticing, passive motion, and faradism. At this time finding no improvement, the case was referred to Dr. Wm. T. Bull, of the consulting staff, with the expectation that he would take her into the hospital and resort to free passive motion under an anæsthetic. She was admitted to St. Luke's Hospital, and the shoulder was freely moved in all directions under an anæsthetic. The usual after-treatment of passive motion was employed, and she came again under my observation a few weeks later.

At different times we have resorted to a course of treatment, such as faradism, hot water douche, and daily manipulations, but for the past two years we have been simply content with observing the case. I find on my record a note under July 19, 1884. The atrophy over the shoulder was still one inch, both shoulders having increased in size just one inch since the 9th of February, 1881. It will be better, however, to give the measurements at the different periods in tabular form:

#### COMPARATIVE MEASUREMENT.

	Shoulder.	Arm.	Elbow.	Length.
Feb. 9, 1881.	R. 11. L. 12.	R. 6½. L. 7½.	R. 6½. L. 7½.	R. 26. L. 27.
July 19, 1884.	R. 12. L. 13½.	R. 8¼. L. 8½.	R. 7¾. L. 8.	R. 1 in. short.
Sept. 6, 1883.	R. 12. L. 14.	R. 8½. L. 9.		R. 25¼. L. 27.

On September 6, 1884, there was no bone or joint tenderness discovered, and it was her belief that she derived no benefit from treatment, and I confess that I was unable to convince her to the contrary. Since that date to the present she has been at work, and, so far as I have been able to learn, she has been free from pain, and has experienced very little inconvenience. Her shoulder is still stiff, yet she is able to use her hand for dressing and eating.

CASE II. *Chronic osteitis, with great trophic changes; cause, probably a sprain; brisement forcè, followed by daily passive movement; restiffening of shoulder; subsequent improvement.*—I have a companion case to this in a patient who came under my observation on June, 1883, was eighteen years of age at the time, and was referred to me by Dr. Martin Burke. She reported that three months before this date a friend in play had given the arm a sharp pull, which caused her some pain at the time. She was quite positive that this was the beginning of her lameness. I found one inch shortening of the limb, a marked degree of atrophy (the measurements, unfortunately, were not recorded), a depression under the acromion process, pain on moving the joint, and a grating crepitation. Use of the arm, however slight, aggravated the pain, and she complained of being unable to rest at night. The faradic reaction was good, and, as compared with the reactions on the sound side, were normal. I made a diagnosis of chronic osteoarthritis of the shoulder, and employed about the same treatment as was adopted in the other case. A sling was employed, however, to afford some protection. After a month's treatment without benefit, I had Dr. Bull see the case in consultation, and he advised free movement under ether, but the patient objected, and it was not until November 6, 1883, that she decided to submit to the treatment proposed. At this date, under ether, in St. Luke's Hospital, Dr. Bull moved the arm about freely in all directions, encountering less resistance than he had anticipated. She remained in the hospital a month or so, and was discharged at her own request. During her stay in the hospital the usual daily passive motion was resorted to, and her failure to



derive the benefit expected was naturally attributed to the lack of vigor in carrying out the after-treatment, and her desire to get home. From that time to the present she, too, has been under occasional treatment of a simple nature, and the improvement really seems more marked during the remissions of treatment. Since May 10, 1884, I have recorded measurements, and they are as follows:

## COMPARATIVE MEASUREMENT.

	Shoulder.	Arm.	Length of arm.
May 10, 1884.	R. 13.	R. 9 $\frac{1}{4}$ .	R. 10 $\frac{3}{4}$ .
	L. 12.	L. 8.	L. 9 $\frac{1}{4}$ .
Sept. 30, 1884.	R. 13 $\frac{1}{2}$ .	R. 10 $\frac{1}{2}$ .	R. 11.
	L. 12.	L. 8 $\frac{1}{2}$ .	R. 9 $\frac{1}{4}$ .
Oct. 19, 1885.			L. 10 $\frac{1}{4}$ .
	L. 12.	L. 8 $\frac{1}{4}$ .	R. 9 $\frac{1}{4}$ .

In May, 1884, she could abduct the arm to an angle of 135 degrees. There was a little rotation and very little tenderness. From time to time I have noted a little increase in the arc of motion, and it is only recently that she has complained of any severe pain. This was on January 19 of the present year. I failed to find any extra heat or signs of progress of the disease. Her general health had suffered, however, and under a tonic her pains diminished. This case had been submitted to the usual treatment that authorities advise, but operative interference has at no time been suggested. She has been able to earn a living, and for a year or two has been free from exacerbations, with the exception of the slight pain recently, for which a cause was readily found.

It has occurred to me, while observing the two cases I have just reported, that an excision in the second one, perhaps, might at some time be indicated. Both have been seen by several of my surgical friends, but the conservative plan has been adhered to, and it is my impression that the final results will justify me in the plan that I have adopted.

The arrest apparently of growth of the humerus in each of these cases seems due to a lesion at the epiphysal line, in the cartilaginous layer separating diaphysis from epiphysis.

In the humerus the nutrient artery takes its course toward the elbows, and this may account for the arrest of growth in the shaft when the upper epiphysis is diseased.

Mr. Edmund Owen, in a clinical lecture "On Injuries of the Epiphyses," published in a recent number of the *British Med. Journal*, says:

"Without entering into tedious detail, and with the view of simplifying the matter, one may call to mind the fact that the special nutrient arteries of the long bones take the course in their respective bones toward the elbow and away from the knee. Now, the epiphysis toward which the nutrient artery runs is invariably the first to join the shaft, therefore the elbow-ends of the humerus and radius are attached early, whilst the knee-ends of the femur and tibia are attached late. Thus, it is evident that in the growth of the arm the integrity of the elbow epiphyses will be of secondary importance to those near the shoulder and wrist; whilst, in the lower limb, the knee-ends of the femur and tibia are of chief concern."

Mr. Jonathan Hutchinson (*British Med. Journal*, July 25, 1885) makes the following statement:

"I have seen many examples of arrested growth in long bones owing to injury or disease of the epiphyses.

No bone shows this arrest more definitely or more frequently than the humerus. To the growth of this bone, the upper epiphysis is of main importance, and its complete detachment is not very infrequent."

When we have an osteitis of the knee the epiphysis is usually elongated, and we have actual lengthening of the femur. In an analysis of sixty-eight cases of osteitis of the knee, Dr. John J. Berry, formerly of the Hospital for the Ruptured and Crippled, found the femur

1	inch longer than its fellow in	2 cases.
$\frac{3}{4}$ inch	"	10 "
$\frac{1}{2}$ inch	"	19 "
$\frac{3}{8}$ inch	"	18 "
$\frac{1}{4}$ inch	"	8 "

"In 6 there was an average shortening of  $\frac{3}{8}$  of an inch, while in five there was no change in length perceptible." (*Trans. Connecticut State Med. Soc.*, 1883, p. 108.)

His observations are but confirmatory of those of Hufeland, Helferich, and Wagstaff. In synovitis the bone is either shorter or remains unchanged. A reason may be offered why the humerus does not grow in length by hypertrophy, while the femur does, apart from the direction of the nutrient artery. It is this: In an epiphysitis or diaphyso-epiphysitis of the proximal end of the humerus the reflex muscular spasm holds the head pretty well secured in the glenoid cavity, and the articulation is normal so far as the head of humerus and glenoid cavity are concerned. Pressure is not removed, and the epiphysis expands by hypertrophy rather than elongates. In osteitis of the lower epiphysis of the femur, the reflex spasm is most marked in the flexors, and the knee soon assumes a semiflexed position, and later subluxation backward often occurs. Pressure is thus removed from the distal end of the femur, and hypertrophy in the vertical axis can take place without opposition.

The absence of suppuration in the cases presented, leads me to suspect sclerosis ossium (Billroth), or condensing osteitis (Volkman). Billroth declares that the causes of sclerosis are very obscure, and that it is rarely recognized with certainty during life. In specimens reported by Macnamara, I am unable to find any sclerosis limited to the epiphysis. The lesion is a diffuse one, and it is sometimes called a *diffuse hypertrophy of bone*.

Mr. Jonathan Hutchinson has placed on record in the *British Med. Journal* for July 25, 1885, a most remarkable case of arrest of growth of one humerus:

"In the case which I am about to relate, the humerus of the left arm measures eight and a half inches, against twelve and half of its fellow. This very remarkable difference has resulted from an injury, followed by inflammation and ankylosis, at the age of a year and a half. The injury is believed to have been slight, but it was followed by inflammation, and the arm was said to have been kept at rest for six months. Thus, there is no proof forthcoming that the epiphysis was detached. It is certain that the result has been bony ankylosis between humerus and scapula, and the remarkable dwarfing of the bone which I have mentioned. The arrest of growth has affected the scapula and clavicle as well as the humerus, but in them it has resulted in slenderness only, not in diminution of length. The

whole clavicle is thin, certainly not more than two-thirds of the thickness of the other, and the long and slender acromion projects sharply over the shoulder. The humerus is slender as well as short, especially in its upper part, and the rotundity of its head is quite lost. There is no very obvious wasting in the lower part of its shaft, and the two elbows seem to be much alike. No difference that can be measured exists in the forearms or hands. The subject can do anything below the elbow, and his power of moving the scapula is also remarkably great. The deltoid is, of course, quite atrophied. He can barely get the hand to touch his mouth, but can manage his fork well. [He can put his hand behind his back, and fasten buttons, etc., though with some difficulty.]

My experience in the forcible movement of the shoulder-joint under ether in cases where the movements are so restricted, has led me to look with little favor upon this plan of treatment. It is difficult to draw the line between cases that should be treated in this way and those that should not, and I am convinced that the differential diagnosis of shoulder-joint diseases, is not fully mastered. I am willing to admit that the fault may be my own, yet I find in my intercourse with fellow practitioners that my own experience is not unique. The older surgeons are slow to recommend this treatment. Some four or five years ago I took considerable credit to myself in diagnosing a rheumatoid peri-arthritis in the shoulder of a man who was referred to me by my friend Dr. Bull. The movements of the joint were very nearly perfect. In extreme flexion and extension, however, resistance was encountered, and the patient complained that his sufferings were greatest when the arm was not in use. If, for instance, he walked a long distance, pain came on and soon became so great that he had to brace himself against a fence or lamp-post in order to get relief. At night he had learned to prop his arm on pillows in order to secure sleep. Ether was administered, the few adhesions were broken up, and his recovery was perfect.

With this case in my mind, and a series of similar cases recorded by Duplay (*Gaz. Médicale de Paris*, 1872, No. 37), I felt quite sanguine in treating a patient referred to me by Dr. Webster, in September of last year.

**CASE III. Rheumatic scapulo-humeral peri-arthritis; brisement forcé three times within six weeks; no relief; pains and stiffness aggravated.**—This gentleman gave me the following history: In May, 1885, without known cause he began to be annoyed with pains in his left shoulder. He had been sleeping in damp apartments, and had at times suffered from what he supposed were rheumatic pains. From May until September the pains about the shoulder had increased, and were aggravated by certain movements, such as abduction, and extension. On examination I found no atrophy, no extra fullness, no joint tenderness, and indeed the shoulder differed very little in appearance from its fellow. On deep pressure under the acromion process and over the back of the shoulder I found some tenderness. The rotation was about one-half the normal and he could abduct the arm to an angle of forty-five degrees without tilting the scapula. I fail to find any history of pain when the limb was at rest, and in this respect the case differs from the one I have just narrated. I advised, however, the employment of force,

and on the 9th of September under ether I moved the joint in all directions, getting a distinct "snap" as I performed extreme abduction. I determined to employ passive motion myself every day, but by the 23d of Sept. the result was extremely unsatisfactory; so on this date I repeated the operation under ether, and on the 23d of Oct. did so again. At this time I adopted a different after-treatment, namely, hot fomentations and rest until Nov. 2d. I then resorted to massage and the Paquelin cautery. A record of the notes in detail is unnecessary. It is enough to state that I had the full coöperation of the patient at every step of treatment, and that no details were omitted in carrying out any plan adopted. By Nov. 9, we both concluded that there had been no improvement. It was a fact, however, that the sufferings of the patient had been aggravated and that his shoulder was much stiffer than when treatment was begun. At my request he called to see me yesterday and reported that he had done nothing in the way of treatment for three months. He has during this time had comparatively little pain; he finds his arm more useful, and I find to-day an increase of the arc of motion; there is no joint tenderness, no crepitation, no atrophy, no shortening, no infiltration.

I do not believe that passive motion is called for in chronic osteitis of the shoulder, or in chronic rheumatic peri-arthritis where the adhesions are extensive. It was my intention to submit the patient last named to a prolonged course of iodide of potassium in large doses, but his stomach rebelled even with the usual precautions, and the drug was discontinued.

Before concluding the cases which bear upon the title of my paper, I desire to present the following, which is interesting from a diagnostic point of view.

On October 19, 1885, Dr. Henry Schweig referred to me a male child two years of age who was brought by Dr. Nasher, under whose care the patient is at present. At the time of my first examination I found a slight atrophy at the shoulder, restricted movements, especially in outward rotation. The little fellow was so frightened at that time that I failed to make a satisfactory examination, but at the next visit, Nov. 10th, I found the signs such as can be shown this evening. At the back of the shoulder was a small cyst-like body apparently bursal. The pectoral muscles seemed contracted and it was difficult to execute complete external rotation. The scapula seemed smaller than its fellow, the shoulder dropped a little, and the albuminoid crepitation of the joint was exaggerated. There was about three-quarters of an inch shortening of the limb. I could not make out any evidence of old fracture on careful handling of the bones, but the doctor informs me that at the time of birth the attending physician reported a fracture of the scapula. From the slight degree of shortening and from the inward rotation of the limb, I am led to infer that a diastasis occurred at birth, and that by the action of the subscapularis, the latissimus dorsi, and the teres major, repair in a normal position was prevented. This to my mind seems the most plausible explanation.

My paper has already exceeded the limits I had intended, and I shall have to omit a discussion of the mechanical appliances best suited for osteitis of the shoulder. Indeed, the anatomy of the joint and the position of the limb seem to demand very little in the way of mechanical support. It has been my aim to dwell chiefly upon the clinical history of the disease and upon the inefficiency of passive motion.

# INDICATIONS AND CONTRAINDICATIONS FOR THE IMMEDIATE SUTURE IN OBSTETRIC LACERATIONS OF THE PERINEUM.<sup>1</sup>

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THE management of the perineum, both during and after labor, has often been the subject of animated controversy. The frequency of the occurrence of laceration of this structure during the passage of the child's head has, in the first place, directed the attention of accoucheurs to the suggestion of various methods by which this accident may be prevented. Thus, it has been proposed by some that the passage of the child's head over the perineum should be expedited; by others, that it should be retarded; whilst a third class maintain that it should be left to nature alone—in other words, that the attendant should remain perfectly passive. The fact that lacerations of the perineum occur in spite of all three of these measures, proves that there is no infallible means by which this accident can be prevented—that it is caused frequently by conditions beyond our control. These factors may be the faulty anatomical structure of the mother's parts or of those of the child, an absolute or relative disproportion between the size of the fetal head and maternal structures, or a wrong direction of the expellant forces during parturition, both as to time and quantity, due either to constitutional weakness or a want of proper self-control.

Since, therefore, prophylactic measures will often fail in preventing a perineal rupture, we will be forced to encounter this accident and adopt the proper means for its repair. The first indication which presents itself to us is, of course, to put the structures in as natural a condition as they were before the occurrence of the laceration. But just at this point authorities differ. The question may be asked, Shall we simply leave the torn surfaces as they are, trusting to the healing powers of nature alone, or shall we bring them together by the aid of sutures? If the latter, shall we introduce sutures immediately after the completion of the third stage of labor, or at some later time, varying from a few days to several months? These are the questions that have been discussed both by older and by later accoucheurs, and the partisans for the one as well as for the other have brought forward their arguments in defence of their respective views.

This controversy has been somewhat influenced by the time in which these opinions were entertained, so that it may be said that while the older masters were mostly in favor of the so-called "let-alone" treatment, our modern authorities in a great majority are in favor of prompt artificial repair. It must not be understood, however, that the former did not recognize the necessity of closing a large chasm when caused by labor, but they did not deem it necessary to close up a rent of the perineum as it usually occurs. In a general way it may be said, then, that some of the authorities were opposed to the immediate suture of a torn perineum, no matter

what its extent. These, however, were a minority. The next class admitted the necessity of the immediate repair when the sphincter ani was involved, but discountenanced any operative measure as long as this muscle was intact; these formed the majority. At the present day, the great majority of obstetricians demand the immediate repair of every lacerated perineum, whether complete or incomplete, except an insignificant rupture of the fourchette, or a little beyond it, whilst a few urge the union by suture of every laceration, no matter how slight.

For a better understanding of the subject, it is necessary to make a proper distinction between the different varieties of laceration of the perineum. For all practical purposes it is sufficient to divide these ruptures into *incomplete* and *complete*. An incomplete rupture is one which may involve any part of the perineum with the exception of the sphincter ani; it may, therefore, consist of a simple tear of the fourchette alone, to a rupture of all the perineal structures up to, but not including, the anus. When this laceration also involves the anus, either tearing the sphincter alone or extending up any length along the rectum, it becomes a complete rupture. For greater convenience, however, another arbitrary division has been made, in order to designate the extent more minutely. Thus ruptures which begin at the fourchette and do not extend further than to about the centre of the external perineal surface, have been designated lacerations of the first degree; when this laceration extends to the sphincter, it is called one of the second degree; and when the latter is also involved, the third degree. All incomplete lacerations belong, therefore, to the first and second, all complete ruptures to the third, degree. Some authors have also added a fourth degree—when the whole perineum is ruptured, both the commissure and anus, however, remaining intact—a so-called *central* rupture. A fifth variety has been described—when the internal sphincter ani is torn; and one author has distinguished between deep and superficial lacerations, each of the first, second, and third degree. For our purpose, however, it is sufficient to assume the three degrees as above stated, but I would suggest that for anatomical reasons the first degree include simply those ruptures in which the skin and subcutaneous cellular tissue (loose fascia) alone are torn, no matter what the length; that the second degree comprise those cases in which, besides the above, also the pelvic fascia and muscular tissue (tendinous centre) are torn; whilst the third degree, in addition, includes the anal sphincters, one or both. This division seems to me to be the more rational, since the perineal body is somewhat triangular in shape; therefore, the further the rent extends along the cutaneous surface the deeper it will also extend up along the vagina, and, consequently, the greater the number of structures involved. The first is, therefore, a *cutaneous* or *vulval* tear, the second a *vaginal* rupture, and the third an *anal* or *rectal* rent.

I crave indulgence for this rather elementary exposition of the subject, but I thought it proper to recall these facts for the better discussion of what follows.

If this anatomical division would at the same time

<sup>1</sup> Read before the Cincinnati Academy of Medicine, April 12, 1886.



indicate to us the proper method of dealing with these several lacerations, the subject could be dismissed with a few words; but, unfortunately, clinical experience has shown that there is a great difference in the ultimate results in individual cases, although the character of the injury may be otherwise the same. Thus it has been shown upon good authority that extensive lacerations, sometimes even involving the anus, have healed spontaneously, if not by first, at least by second intention. On the other hand, it has also occurred, that where the greatest care has been exercised in bringing the torn surfaces together by sutures, they have not become united. This proves that the anatomical feature is not the basis upon which alone we can construct a formula for treatment, but that other things must be taken into account, as the condition of the patient, both general and local, the time and method of suture, the proper after-treatment, etc.

To inquire into these conditions is my purpose this evening, and, if possible, to make such deductions as explain the causes of success in one or failure in the other. It occurs to me that an examination of the arguments both for and against the immediate repair of a laceration, as they have been advanced by different authors, might best serve our purpose.

The opponents of the immediate suture claim:

1. That the patient is already too much exhausted from the throes of labor to undergo another, oftentimes extensive, operation immediately afterward.
2. That posture alone will suffice in effecting spontaneous union, rendering the use of sutures unnecessary; or, *per contra*—
3. That a lacerated wound, such as occurs in a perineum during labor, never heals by first intention, even after union by suture; and
4. That such union, even if it could occur, would be prevented by the constant flow of the lochial discharge, which by no contrivance can be kept from the fresh wound.
5. That a perineal laceration, as seen just after labor, seems much larger than it really is, on account of the abnormal stretching of the parts.
6. That the operation is itself a confession of carelessness or ignorance in the management of the case.

In answer to these objections, the advocates of the immediate operation claim:

1. That the patient is in a better condition to bear the operation immediately after labor than subsequently, on account of the obtunded sensibility of the genital parts.
2. That posture alone will not suffice for primary union, because the least change in position will disturb the apposition of the surfaces.
3. That although the rent in the perineum is a lacerated wound, it partakes almost of the character of an incised wound, and the surfaces will readily unite if brought together immediately after labor.
4. That in order to prevent the irritating action of the lochia on the torn surfaces the wound ought to be closed up by suture.
5. That, no matter how slight the laceration, it ought to be sutured, in order to restore the parts to their primitive condition; also because the slightest rent may endanger life by sepsis.

Let us now examine these arguments critically, by comparing one with the other in the proper order.

First, as regards the condition of the patient. It is true that immediately after labor a woman is thoroughly exhausted, and needs nothing more than absolute rest. This exhaustion is proportionate to the duration of labor, and strength of the individual. In a natural labor, however, where there has been no obstruction, except that of the perineum, it can hardly be held that the patient is so thoroughly outdone that her health, or even her life, is endangered by an operation like that of perineorrhaphy. There may, however, be exceptions in cases of dystocia, or pathological conditions of the mother, as in eclampsia, the attacks continuing after labor, violent hemorrhage due to non-contraction of the womb, etc. Or, also, the parts may have been subject to long-continued pressure, causing brittleness, œdema, etc., as we shall see further on. Ordinarily, however, the exhaustion is not excessive. On the other hand, it is true that the sensibility of the parts is temporarily obtunded just after labor, rendering the introduction of sutures less painful at that moment than some time afterward. Occasionally, however, the parts are exceedingly sensitive, as I have witnessed in several instances, when the mere insertion of the point of the needle caused an expression of great pain. If need be, however, an anæsthetic can be resorted to anew, or, if such an agent was used during the delivery of the child followed immediately by that of the placenta, the patient can be kept under its influence until after the completion of the perineorrhaphy.

Second and third, as regards the influence of posture over the union of the torn surfaces. This involves the question of union by first intention. The opponents of immediate operative interference divide into two contradictory classes. Those of the first group claim that union may take place after simple apposition of the parts, whilst the second class denies that in a lacerated wound union can occur by first intention under any circumstances, even after approximation by suture. That well-authenticated cases of union of a lacerated perineum by simple posture have been recorded, is well known. It is doubtful, however, whether such union ever took place by first intention, or if the parts were really in as good condition afterward as before the occurrence of the accident. A lacerated wound usually does not heal by first intention if the edges are very ragged and the parts contused. This is our experience in other parts of the body, and there is no reason why the perineum should form an exception to the rule. On the contrary, the peculiar hidden condition of the perineum would render such a happy result less likely to occur here than perhaps anywhere else. If we add to this the bruising and contusion of the parts, either from the introduction of the hand, or the use of instruments, or the long-continued pressure of the head of the child upon the soft structures of the mother, they certainly are still less in a condition favorable for immediate union. This cannot be obtained by the use of suture, much less from posture alone. To obtain direct primary union, the rent must approach in character as much as possible that of an incised wound with clean-

cut edges, and, furthermore, the vitality of the parts must not be impaired or destroyed. If the perineum was thin, and the tear a rapid one, the latter appears almost like a cut, and with proper apposition of the edges, other conditions being favorable, may heal up as perfectly as an incised wound. It is possible that in such a case apposition by posture alone would suffice, but it is exceedingly doubtful if so quiet and undisturbed a position can be maintained by any woman long enough for the parts to heal. It is, therefore, more than likely that in these cases union occurs by second intention.

Then, again, the extent of the laceration will determine the manner of union. If the rent be one of the first degree, simply cutaneous, the parts may be readily held in apposition; but if it involve the muscular structure, invading the perineal body, and constituting a laceration of the second, or even of the third degree, the retraction of the muscles will certainly cause the rent to gape, and no form of posture alone will bring the torn muscular parts again into apposition. Here the suture is necessary, and the surfaces must be in such a condition as to permit close approximation. We therefore conclude that if the lacerated wound has smooth edges resembling an incised wound, or if the lacerated wound has been converted into an incised wound by trimming off the ragged edges, and there has been no undue pressure to disturb the circulation of the parts, we may reasonably expect union by first intention.

Fourth, as regards the influence of the lochia on the healing process. A very important influence over the subsequent condition of the laceration has been attributed to this discharge by both parties. The partisans of the "let alone" treatment claim that it will prevent union even after the application of the suture, while the advocates of immediate operation deny this allegation, and rejoice that if it does possess any irritant properties, it will for this very reason interfere with the union of the open wound. With the investigations in regard to the cause and nature of septicæmia and puerperal fever, the lochia have attained a still greater notoriety. It is justly claimed that the laceration of the genital tract, be it ever so slight, offers a ready entrance for bacteria or germs of infection; and that the decomposed lochia are the carriers of this infection. A powerful argument is therefore advanced in favor of shutting out these dangerous microorganisms from the open wound by closing up its edges by means of suture. If this procedure will effectually prevent septicæmia, it would be incumbent upon us to look after the smallest break in the maternal tissues, as well as the largest; it would be imperative to pay as much attention to lacerations of the first as of the third degree. It is for this reason also that some authorities insist upon the suture for the minutest laceration.

Two questions present themselves here: (a) Is it certain that the germs of infection are introduced only from without; or may they also develop within the body. This question is still *sub judice*. Most authors hold that there are several forms of puerperal fever, one of which may be due to the introduction of poison from without (exosepsis), the other due to

decomposition in the body of the patient (endosepsis). Lately, however, the opinion is gaining ground that the poisons of puerperal septicæmia and puerperal fever are always introduced from without, and that puerperal septicæmia is nothing else than the ordinary septicæmia of wounds. If the former be true, the closest attention to wounds would not prevent, in all instances, septicæmia; if the latter, too much attention could not be paid to it. (b) Can we certainly exclude the entrance of these microorganisms into the tract of the wound? It is positive that the mere bringing together of the edges of the wound will not prevent infection; something more is necessary, and that is thorough antiseptis. It has always been a question to my mind, however, whether the daily irrigation—once, twice, or even thrice a day—is sufficient to destroy the bacteria of decomposition. If we could treat a wound as aseptically in this region as in other parts, either by keeping up a continual irrigation or applying a permanent antiseptic dressing, we might reasonably suppose that we had prevented any chance of bacterial infection. It is, however, impossible to close up the many orifices in this vascular region so hermetically as to prevent the absorption of some septic material. Nevertheless, I would not discountenance the use of antiseptic injections where septicæmia is suspected, but simply desire to raise a mild question whether we really accomplish as much as we suppose. On the other hand, I doubt whether the lochia themselves are a source of irritation. They are a natural excretion of the body, just as the urine is, and if the latter fluid does not prevent the proper healing of a lithotomy wound, it does not appear why the former should be unfavorable to the healing of a wound following parturition; provided stagnation is not permitted, the lochia ought not to interfere. It is, perhaps, this precaution of cleanliness which is as much of importance as the use of the antiseptic itself.

Fifth, as to the size of the wound after parturition. If one will observe the perineal rent just as it occurs after the passage of the child's head or shoulder, and then will reexamine it after a day or two, he will be struck with the difference in length. As the head bulges the perineum before it, it distends this structure to three or four times its usual size in the non-pregnant state. A rent of one inch or an inch and a half in extent, if measured by the size of an ordinary perineum, would involve this structure in its entirety; whereas, upon retraction, it may comprise only a fractional part of an inch. This is especially evident when the laceration is one of the first degree, simply involving the cutaneous surface and the subcutaneous cellular tissue. After the head has passed the vaginal ring it carries the elastic tissues before it for a good distance, and if the perineum be torn from its edge to the muscular parts only, the tear may, nevertheless, appear of large size. As we have stated before, if the fascia and muscular tissue are not involved, no lateral traction on the sides of the wound will occur, and such a laceration may, therefore, heal spontaneously, other conditions being favorable. It is, therefore, proper to judge of the size of the rent rather by what remains between the angle of the wound and the rectum or

anus, than from its depth from its beginning in the posterior commissure to its termination in the perineum. It is true, that when the parts have been greatly stretched we can ascertain the exact depth of the laceration after the lapse of considerable time, but at this period we have lost most of our chance of securing union by first intention. This retraction of the perineum has been dwelt upon especially by those who do not favor immediate repair of the lacerated perineum, but prefer to wait twelve to twenty-four hours, until involution has already somewhat taken place, when the parts may offer a better guide for the number and extent of the sutures. That a small rent may leave a great deformity is not true, otherwise we would find a great many more cases requiring the secondary operation for prolapsus of the uterus, rectum, bladder, etc., than we do meet. Consequently, if the laceration be simply cutaneous, and there be no other indication, as danger of sepsis, etc., it may be safely left to nature, taking care only to keep the patient as quiet and as cleanly as possible.

The last point, that the operation is itself a confession hardly requires answer. It would be cowardly, indeed, in an accoucheur to withhold the truth from the patient, or, at least, her friends, in an extensive laceration, simply to protect himself. It has already been stated that lacerations will occur in the hands of the most attentive and skilful, because we cannot control all the causes. If, however, carelessness or ignorance has been the cause, so much the more reason for the attendant to make at least a partial reparation by sewing up the laceration. I would only except such instances in which the patient is of an extremely nervous temperament, inclined to exaggerate the smallest ills, and the laceration is very insignificant—a simple tear of the fourchette, or a little beyond.

From the foregoing, I draw the following conclusions:

1. A laceration of the first degree, as long as only the skin is involved, may be left to heal by postural apposition, provided there is no danger of septic infection. If there should be any danger of the latter, although the closing of the wound will not altogether prevent infection by absorption, it will at least lessen this danger, especially with antiseptic treatment.

2. A laceration of the second degree, when the fascia and muscles are torn, ought, if possible, always to be repaired immediately after the occurrence of the laceration, provided there are no complications on the part of the patient, as extensive oedema of the parts, great bruising, etc. In such an event, we cannot expect union by suture immediately; it is, therefore, necessary to wait a certain length of time, from a few hours to a few days, in order to give the parts a chance to recover their proper vitality and tonicity; or, after having pared the edges, we may introduce the sutures, and gradually tighten them as the swelling subsides. Just here I would direct attention to the tension of the suture. If it be drawn too tight, the vessels may be strangulated, and union may be thus prevented; if, on the other hand, too loose, the surfaces will recede from each other as

the swelling subsides, and the stitches will serve to no purpose. Consequently great care must be exercised in the proper tension of the sutures, and if the parts do not look favorable for primary union it is better to wait a few hours, then place the patient under an anæsthetic, pare the edges, and proceed with great care.

3. Lacerations of the third degree produce such a deplorable state of the patient afterward, that every attempt should be made to repair the accident immediately. Even if we should not be wholly successful, we may be so at least partly, by converting a laceration of the third degree into one of the second degree, which is vastly more comfortable than the loss of the sphincter power of the anus. If very urgent reasons should prevent us from attending to this accident immediately after labor, we should at least select the earliest possible time to repair the accident, proceeding with all due care and skill, as in the second operation.

A last word as to the form and method of suture. In the early part of this paper it has been said that the length of the laceration along the external perineum will, as a general thing, be also indicative of the extent upward into the vagina. It will be seen that whilst laceration of the first degree would require but very superficial sutures, those of the second and third degrees must be united by deeper and stronger sutures. If the fascia or tendinous centre of the perineum be torn, the divided edges must also be brought together, which can only be done by deep sutures, the depth being proportionate to the depth of the laceration upward. There can be nothing more reprehensible than the mere cutaneous union of a large and deep laceration. The lower line is truly approximated, but the upper remains open, allowing the fluids to become pocketed, and thus preventing union, and danger of septicæmia. It is better to leave the rent open to allow at least free drainage. If the rectum and vagina be torn a high distance upward, it may become necessary to unite each separately.

For ordinary cases I prefer silk, as it gives less discomfort to the patient, is ready at hand, and more easily introduced. It possesses, however, the disadvantage of becoming septic by the absorption of septic material. This may be overcome by laying the strand first in a solution of carbolic acid or corrosive sublimate, and then keeping up irrigation by an antiseptic solution afterward. Another disadvantage is, that it cannot be tightened, if found after a while too loose. It is, therefore, not adapted for those cases in which there is excessive swelling. Silver wire possesses the great advantage of causing less danger of sepsis, and it may, also, be tightened afterward by simply giving it an additional twist. It is, however, less comfortable to the patient, for the slightest movement on her part will cause the ends to strike some portion of the body in the vicinity of the united edges. As silver wire is, however, stronger, it is better adapted for the cases in which the suture ought to be introduced at a great depth—for example, in complete lacerations. If preferred, the wire may also be used for the deep, while the thread is employed for the superficial sutures.



## MEDICAL PROGRESS.

UTILITY OF THE ANTIPIRETICS.—In an elaborate article thus entitled, PROF. DESPLATS emphasizes the following conclusions:

1. Antipyretic agents, in moderating the temperature, moderate also all the other febrile phenomena.
2. That fevers are thus rendered not only less painful to the patient, but also less grave, and that the resultant complications are rare.
3. That the disadvantages involved in this treatment are so slight as to be neglected.
4. That the antipyretic employed, whether cold or tepid baths, or chemical compounds, should depend upon the peculiarities of the case. —*Rev. de Thérapeutique*, April 1, 1886.

THE BEST METHOD OF REMOVING FOREIGN BODIES FROM THE EAR.—DR. JONATHAN HUTCHINSON writes as follows in the *British Medical Journal* of April 10, 1886:

I am induced to draw attention to a method of treatment which I long ago advocated, and which is so simple and efficient that it almost supersedes the need of knowledge. It is the use of a silver wire-loop, instead of either forceps or scoop. I have never, since I was a student, used either of the latter instruments; and, for the purpose of extracting hard bodies from the ear, I hold that they are most dangerous. With a flexible silver wire-loop, or, if need be, with two placed at right angles, I have repeatedly succeeded when all other means had failed. Thus, not only is the loop quite devoid of danger, but it is both more easy of use and far more efficient than any other method. It is impossible that it can injure the membrana tympani, or the walls of the canal. The method of procedure is, after having put the patient under an anæsthetic, to introduce the loop gently into the ear, and turn it about until it is believed to have got behind the foreign body. This it will often do at once; but sometimes a little patience is necessary. In one instance, I took out a piece of heavy lead in this way with very little trouble, using two loops at right angles with each other. The simplicity, safety, and efficiency of the method make it desirable that it should be better known.

PHYSIOLOGICAL ACTION OF ADONIDIN.—DR. H. A. HARE gives the following conclusions derived from an experimental study of adonidin:

Adonidin in all doses increases arterial pressure by stimulating the vasomotor centres, and by increasing the cardiac force.

In moderate doses it increases the pulse-rate and force from the first, but when large toxic doses are given, it primarily slows the heart by stimulating the pneumogastric, and then increases pulse-rate by depressing the inhibitory nerves, and stimulating the accelerator apparatus.

The slowing of pulse-rate is also in all probability due in part to increased arterial pressure, as under these circumstances the blood-paths are greatly diminished in calibre.

On the nervous system the drug has but little action, unless the quantity administered be enormous. Under these conditions it paralyzes the sensory side of the

cord, but has no effect on the motor tract, or on the efferent or afferent nerve trunks.—*Therapeutic Gazette*, April 15, 1886.

EFFECT OF DRUGS ON THE AUTOMATIC MOVEMENTS OF THE STOMACH.—SCHUTZ has experimented upon the effect of certain drugs when introduced into the excised stomach of a living dog, the viscus being maintained at the temperature of the body in a moist chamber.

Before the introduction of the drugs, spontaneous movements are observed, the tendency of which is evidently to push the gastric contents toward the pylorus. Many poisons retard or entirely inhibit this movement; such are atropine, cocaine, nicotine, pilocarpine, and chloral. Other drugs render the movements atypical and more numerous and rapid, as strychnine, minute doses of nicotine, caffeine, veratrine, emetine, apomorphine and tartar emetic. Others, again, do not directly hinder the movements, but produce the result that the muscular coat, once contracted, becomes relaxed either not at all or only very slowly; these are muscarine, physostigmine, digitaline, helleborine, and scillaine.—*Centralb. f. d. gesammte Therapie*, April, 1886.

BROMINE IN DIPHTHERIA.—DR. P. HESSE, of Griefswald, calls attention to the fact that bromine, as a local medicament in diphtheria, has held its own, for some twenty years, better than any other remedy, and recommends for inhalation the following solution:

Pure bromine,	
Potassium bromate . . . . .	ää 1 to 2 parts.
Distilled water . . . . .	400 "

Without regarding bromine as a specific, Hesse maintains that, properly applied, it is less fallible than other medicaments. Certain precautions and limitations in the application of the treatment are indicated, viz.:

1. Treatment to be instituted as early as possible.
2. Direct application by the brush should not be made.
3. The frequency of application, and the concentration of the solution used for inhalation should be conditioned by the severity of the case, and the degree of congestion induced in the pharyngeal mucous membrane.
4. The solution should always be fresh, and the treatment should be accompanied by ice-cold applications to the neck.
5. The method is contraindicated in laryngeal diphtheria, in bronchitis, and in affections of the lungs.—*Deutsches Archiv f. klin. Med.*, March 24, 1886.

SALICYLATE OF SODIUM IN IRITIS.—At the meeting of the Baltimore Academy of Medicine, held February 16, 1886, DR. SAMUEL THEOBALD referred to some interesting results he had recently obtained by the use of salicylate of sodium in iritis, occurring in patients with a history of inflammatory rheumatism.

Three weeks ago a young lady had called to see him. She had a most intense plastic iritis, pupil perfectly immovable. She had only perception of light, and could not count fingers at the ordinary distance. She was ordered sodium salicylate, and in a few days she obtained much relief. This salt was then withdrawn and iodide of iron ordered. She did well until the end of several

days, when she reappeared, complaining of the same trouble, which increased in intensity until, at the end of two days, she was in the same condition as originally. The salicylate was repeated, as well as the atropine drops locally, and mercurial inunctions to temples. Cathartics were ordered, and in *two days* she was so very much improved that vision equalled  $\frac{3}{8}$ , and the media was sufficiently clear to permit satisfactory inspection of the optic disk.

She had had some glaucomatous tension, but this did not prevent his ordering atropine, nor interfere with the physiological and therapeutical action of the drug.—*Maryland Medical Journal*, March 16, 1886.

**HEREDITARY PHTHISIS.**—SIRENA and PERNICE have carefully examined the testes and ovaries of persons dead of phthisis, and have as yet been unable to demonstrate microscopically the presence of tubercle bacilli.

Nevertheless, by the intra-abdominal injection, with proper precautions, of infusions of the semen or ovaries of tuberculous individuals, they have succeeded in inoculating guinea-pigs. The animals died in from three to five months with general tuberculosis, and the abundant presence of tubercle bacilli was proven.—*Centralb. f. klin. Med.*, March 6, 1886.

**KEFIR OR MILK WINE.**—KOGELMANN, of Graz, has shown that the imported kefir-fungus is not necessary for the production of milk wine. The same ferment is native with us, and is abundantly present in buttermilk and also in cream which has become strongly sour. Kogelmann gives the following directions for the preparation of kefir: One part of buttermilk is added to two parts of fresh milk. Active fermentation sets in within a few hours, and in three days there is obtained a fluid which has the odor of wine, and which contains alcohol, carbonic acid, lactic acid, casein, etc., and which is identical with the imported kefir. The range of temperature within which the fermentation occurs is between 48° and 70° F., the best results being obtained at 59° F. The bottle used should be strong and should be but two-thirds filled. It must be at least thrice daily corked and vigorously shaken, then opened and laid for ten minutes as nearly horizontal as practicable, in order that the carbonic acid evolved shall escape, for fermentation is checked in the presence of an excess of gas. One part of the resultant kefir is sufficient to induce the appropriate fermentation in four parts of fresh milk.—*Centralb. f. d. ges. Therapie*, April, 1886.

**POMADE FOR USE IN INTERCOSTAL NEURALGIA.**—In cases of intercostal neuralgia DURAND recommends the inunction, on the painful region, of a pomade constituted as follows:

Veratine,  
Chlorhydrate of morphine . . . aa 1 part.  
Cold cream . . . . . 50 parts.

—*Journal de Médecine de Paris*, April 4, 1886.

**THE DIRECT ELECTRIZATION OF THE HEART.**—DR. J. LEONARD CORNING has devised a novel method for the practically immediate application of electricity to the heart muscle. He states that by the use of the

constant galvanic current, good results are obtained in angina pectoris, while in the cardiac tremor or weakness due to excesses, as also in conditions characterized by intermittent and irregular action, the faradic current is more suitable. The details of the method are given in the following terms:

I first spray or brush the posterior wall and other portions of the pharynx with an eight per cent. solution of the hydrochlorate of cocaine. When I have satisfied myself by repeated trials that reflex nausea has been sufficiently abolished to admit of the introduction of the handle of a spoon as far as the epiglottis, I proceed to the second step in the method. This consists in the introduction of an œsophageal electrode, well insulated, except for about an inch and a half at the point. The electrode is passed down the œsophagus until the non-insulated extremity of the instrument lies behind the heart; or, in other words, when the region situated between the seventh and ninth dorsal vertebrae has been attained. In order to ascertain beforehand how far it is necessary to introduce the electrode, I am in the habit of placing the tip of the instrument over the spinous process of the eighth dorsal vertebra, and accurately measuring the distance between that point and the mouth. With a view to prevent the descent of the electrode beyond the desired points, a round disk of leather or metal is secured in front of the mouth, when the sound has been introduced as far as requisite. The electrode is then connected at its disengaged extremity with one of the conducting cords of a faradic or galvanic battery. The remaining conducting cord of the battery is then connected with a flat electrode, which is then placed over that portion of the anterior aspect of the heart not overlapped by a lung (a triangle the apex of which is at the fourth left sternal articulation, extending downward and outward to the union of the fifth rib with cartilage, and inward and downward to the sixth rib). To facilitate matters, the centre of the electrode may, instead, be simply placed over the point where the apex beat is felt. When an assistant is not available, I am in the habit of securing the external electrode in place by means of a simple band of elastic webbing which is passed around the thorax and secured in place by an ordinary buckle.—*Virginia Medical Monthly*, April, 1886.

**NOTES ANENT PESSARIES.**—At the meeting of the Carlisle Medical Society on February 11, 1886, DR. MACLAREN read a series of notes, entitled as above, and here condensed.

1. Always teach the patient to remove and introduce her pessary, and reject all pessaries which do not allow of this. I am sure that every useful purpose can be served by an instrument which may be taken out each night and replaced in the morning.

2. Always have the pessary made of a material impermeable to moisture. Soft, pure rubber or vulcanite are the best. Leaving in diluted Condy's fluid over night will make such perfectly clean and odorless. A pessary which is at all absorptive becomes very foul and offensive.

3. Get your patients to soap a soft rubber pessaries. Oil spoils the rubber, making it soft and porous.

4. Be sure that a pessary is needed.—*Edinburgh Medical Journal*, April, 1886.

# THE MEDICAL NEWS.

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SATURDAY, MAY 1, 1886.

## THE DEATH OF DESDEMONA.

THE publication of Othello in the Variorum edition of Shakespeare has aroused anew the interest of the medical profession in the death of Desdemona, the more especially as the volume is enriched by the observations of several of our most eminent physicians and surgeons on the mechanism of her taking off. It happens thus that we are again called on to wonder at the universality of Shakespeare's knowledge, at his fidelity to Nature in all her moods, and at that subtle instinct which surpassed imagination, and solved problems without the aid of "the logic of the schools," or the laborious method of induction from recorded facts.

But Shakespeare, as well as Homer, sometimes nodded. He who utters such a heterodox opinion, must be prepared, as was our gifted but unfortunate countrywoman—Miss Bacon—to brave the anathema pronounced against all those who purpose to disturb the poet's bones. Miss Bacon, indeed, almost alone was rash enough to deny to Shakespeare any but the most trivial share in the production of those masterpieces which have not ceased to astonish mankind. If we can admit her conjecture that Lord Bacon was the real author of the great works bearing Shakespeare's name, we are no longer surprised that his legal attainments were so remarkable that a Lord High Chancellor (Lord Campbell) made them the subject of an imposing volume, or that his medical knowledge should exercise the pen of one of England's greatest alienists,—Dr. Bucknill.

Bacon himself, a valetudinarian, occupied much time with hygienical and therapeutical questions, and in his work "On the Advancement of Learning" gave much consideration to the "knowledges" of

"Medicine or Art of Cure." "I have been ever puddering in physic all my life," he said in one of his letters to Sir Humphrey May.

Miss Bacon has marshalled such a mass of facts, and has reasoned on them so acutely that no one, who has the patience necessary to wade through her work, can fail to be impressed with the weight of the testimony on her side of the question, if not wholly convinced of the truth of her position. If the "Old Player," as Miss Bacon rather disdainfully called him, who was an acute and successful man of business, bargained with Bacon—always impecunious, and often in actual distress for want of money—we need no longer be surprised at the universality of the knowledge exhibited in the plays.

Of all of the medical situations conceived by Shakespeare, that of the death of Desdemona seems to us the least happy in its scientific aspects. The physiological and pathological requirements are subordinated to the exigencies of dramatic effect. Notwithstanding the important medical and surgical questions involved, it is a singular fact that neither Bucknill (*The Medical Knowledge of Shakespeare*, London, 1860), nor Stearns, of Hartford (*Shakespeare's Medical Knowledge*, New York, 1865), makes any allusion to the death of Desdemona. A symposium of medical and surgical experts enliven, with their interesting and instructive opinions, the pages of the Variorum Shakespeare devoted to this part of the tragedy of Othello. We can the better understand their views, by reproducing here so much of the tragedy as bears on the mode of Desdemona's death. She ends some pathetic pleading for delay, with

*Des.* But while I say one prayer.

*Oth.* It is too late. (*Smothers her.*)

*Oth.* What noise is this? Not dead yet? Not yet quite dead?

I that am cruel, am yet merciful.

I would not have thee linger in thy pain?

So, so.

Aemilia then enters, and narrates the death of Rodorigo, which occupies but a few minutes, when—

*Des.* O falsely, falsely murdered.

*Aemil.* —Oh, Lady, speak again, sweet Desdemona, oh, sweet mistress, speak.

*Des.* A guiltless death I die.

*Aemil.* Oh, who hath done this deed?

*Des.* Nobody; I myself, farewell.

Commend me to my kind Lord; oh, farewell.

There is an obvious inconsistency in the mental condition of Desdemona and the alleged injury, in this prompt revival and discourse in a purposive way, and then the end without further injury. We believe that in this, Shakespeare does not conform to nature, and that, indeed, he has in view the dramatic effect quite irrespective of pathological considera-



tions. The eminent physicians and surgeons whose opinions are given by the editor of the *Variorum* edition, are not agreed as to the mode of death, or as to the physiological and psychological insight displayed in the narrative. When first suffocated, Desdemona, a sensitive, sympathetic, and impressionable subject, we may suppose, merely swooned, overcome with fear and grief and loss of breath. If she had rallied from this state, and been able to discourse as represented in the play, her condition had harmonized with the facts of medical science; but giving her coherent thought and speech after Othello had, to save needless pain, extinguished, as he supposes, the last spark of life, is not consistent with her sudden and eternal silence, without further injury, although such a conclusion is necessary to the dramatic action. We therefore fully agree with Dr. Da Costa that the details of "Desdemona's death cannot be reconciled to strict scientific facts"—a conclusion in which he is supported by Drs. Mitchell and Agnew.

Opinions as to the nature of the injury inflicted by Othello with the exclamation "So, so," are widely divergent. In the "Talisman," where Scott makes the Grand Master of the Templars stab the Marquis of Montserrat, it is with the words "*Accipe hoc!*" that the dagger strikes home.

Dr. Mitchell holds that with "so! so!" Othello should "throttle Desdemona fiercely, again and again." It appears to be the stage tradition that Othello, to make sure, uses the dagger, but if so, he must seem to be governed by a sudden impulse, for in his soliloquy, before killing Desdemona, he says:

Yet I'll not shed her blood,  
Nor scar that whiter skin of hers than snow,  
And smooth as monumental alabaster.

And afterwards to her uncle, on his entrance, he exclaims:

There lies your niece,  
Whose breath these hands have newly stopp'd.

Desdemona's appearance, as described by Othello, lends support to the theory of suffocation, and yet it may be explained by death from a dagger wound:

Now: how dost thou look now? Oh, ill-starr'd  
wench,  
Pale as thy smock.

As she was, apparently, suffocated in her night garments, her "smock" was, no doubt, white. Her face must, then, have been pallid. Although after strangulation with a cord which compresses the superficial veins, the face may be turgid, dark, and swollen, mere suffocation causes pallor, for the return of blood from the head and face is not prevented. The most eminent authorities—for example: Caspar (*Practisches Handbuch der gerichtlichen Medicin*, 5th ed., by Liman, vol. ii. p. 611), and Woodman and Tidy

(*Forensic Medicine and Toxicology*, Am. ed., p. 852)—are agreed on this point; and hence that there may be nothing in the appearance of the body to indicate that death is due to any other than natural causes.

It is no doubt true, as remarked by Dr. Da Costa, in the symposium of experts, that Desdemona's condition during her time of dying is not incompatible with death by stabbing. After receiving the fatal blow with "so! so!" she may have rallied from the first shock sufficiently to utter the words put into her mouth, and then have sunk by internal hemorrhage. If, however, we accept Othello's words as conclusive of Shakespeare's intention, death by suffocation is the mode of ending proposed by the dramatist.

Dr. Hunt, one of the surgical experts of the symposium, finds an easy explanation of all the difficulties, by his theory of fracture of the cricoid cartilage. Thus he preserves Shakespeare's consistency, and offers additional evidence of the universality of his attainments. The element of time seems to us to present an insuperable objection to the acceptance of this theory. If the injury to the larynx could cause death so quickly—in a few minutes—could Desdemona have uttered thoughts indicating complicated reflections? If not so seriously injured, although a broken cricoid were its chief result, would not death have come more slowly with effusion from inflammation and cedema of the glottis?

On the whole, we must conclude that Shakespeare was more concerned to obtain a dramatic effect than to be true to the scientific aspects of death by suffocation.

The tragedy of Othello suggests many questions of extreme psychological interest, which, strangely enough, have escaped the attention of those who have written of Shakespeare's medical knowledge. Desdemona is represented as one of a type by no means uncommon in our day. She is one of the nervous—the hysterical group—impressionable, and having physical attributes in harmony with her mental and moral organization. Shakespeare has availed himself with wonderful skill of these psychical and physical qualities to develop the tragedy in its most exquisitely emotional phases. From the first moment when Desdemona stands transfixed with the grim narrative of the strange incidents of Othello's career, until her last prayer for life, we are made to witness the influence of a vivid, passionate, and unfamiliar personality, on a susceptible, emotional, and intensely feminine organization. It would, however, carry us much beyond our proper limits to explore this inviting field, and, hence, we must content us with urging on our readers a new study of the curious psychical problem worked out in the magic pages of Othello.

### THE METHOD OF ANTILLUS FOR THE TREATMENT OF ANEURISM.

BEFORE the invention of the operation of ligation for the treatment of aneurism, the only operation in use was that attributed to Antyllus, which consists in cutting down upon the sac, ligating the artery on both sides of it, and then splitting open the sac or excising it. Amputation, which was the only alternative, can hardly be considered anything but a mode of avoiding any direct treatment. But with the invention of the operation of ligation the ruder method of the older surgeons was almost wholly superseded, and the method of Antyllus is now almost obsolete. From time to time, however, exceptional cases have arisen in which it seemed impossible, or clearly unwise, to practise the modern method, and in such cases the method of Antyllus has been employed. This was notably the case in a number of patients operated upon by Syme; and other surgeons have found it preferable to amputation in cases of traumatic or diffuse aneurisms. In 1884, Murgulovic, in an Inaugural Dissertation, reported a successful operation of this sort for the cure of a traumatic aneurism of the femoral artery. A year ago Largeau, in the *Archives Gén. de Médecine*, March, 1885, strongly urged the general employment of the method of Antyllus for all aneurisms of the popliteal artery. Most recently SONNENBURG, of Berlin, has reported a successful operation of this sort, and made some interesting comments upon the method in the *Berliner klinische Wochenschrift* for March 1, 1886. His patient was a sailor, forty-nine years old, with pronounced sclerosis of the arteries, who applied for relief from a spontaneous aneurism of the popliteal artery, which he had observed for only about two months. The size of the tumor was about that of an apple. He was unable to bear digital compression, and Sonnenburg feared gangrene in case he ligated the femoral artery. In choosing between the method of Antyllus and amputation, he decided upon the former. The operation was conducted according to the bloodless method of Esmarch. It was extremely difficult to separate the sac from the surrounding parts, especially the veins. The vessel was ligated above and below the aneurism, and was divided at two points, about six inches apart. The cavity was disinfected with iodoform and lightly packed, a drainage tube was inserted, and the wound was sewed up, after which the leg was enveloped in cotton and slightly elevated. The operation lasted about two hours. The collateral circulation was soon established, but localized gangrene occurred in the sole of the foot, along the lines of distribution of the terminal branches of the posterior tibial artery. The patient was dismissed from the hospital in four months and a half, and at the end of six months had full use of his leg, with free motion at the knee-joint

and no apparent defect except some tenderness at the seat of the gangrene.

The operator, in his paper, urges the importance of preserving the integrity of the popliteal vein in an operation of this sort, and argues that the conditions are more favorable for the establishment of the collateral circulation after occlusion of the popliteal artery, than after occlusion of the femoral below the origin of the profunda. This depends upon the fact that the *suprema genu* plays an important part in the establishment of the collateral circulation when the femoral is left open, but is excluded from participation in it when this vessel is ligated. This advantage is lost, however, if the ligature is placed very high up on the popliteal, or encroaches upon what is properly the femoral artery.

It is often objected to the method of Antyllus that secondary hemorrhage is very common after it. But, as Sonnenburg observes, this objection is mainly founded upon experiences which antedate the advances and refinements of modern surgery. There can be no doubt that a more frequent employment of this method at the present day would lead to a much better exhibit of results than it has heretofore shown. Something may be said, too, as to the dangers attendant upon any other method of treatment of aneurisms, especially of the popliteal artery. In this city, digital compression may be said to be the method of choice; and the results obtained by Philadelphia surgeons certainly warrant this preference. The operation of ligation of the femoral artery is usually reserved for cases which have resisted careful and thorough compression with the fingers of a relay of assistants. But failures have occurred everywhere after the employment of either, or of both methods, and a study of the recent literature of the subject shows that secondary hemorrhage, gangrene, and death, are not very uncommon sequences of these methods. It is not easy to determine just when it would be proper to prefer the ancient method of Antyllus to ligation or compression, although it is, probably, not too much to say that it ought almost always to be preferred to amputation. With the advantages of anæsthesia, the bloodless bandage, and the use of aseptic methods, it might prove to be wise to try the applicability of this mode of operating to other than the most difficult sorts of aneurisms. And if a number of simple aneurisms of the popliteal artery were to be treated by excision, instead of by distal ligation, this plan might come into greater favor than it can so long as it is regarded as a last resort.

### THE WEIR MITCHELL TREATMENT.

It is notorious that from West to East knowledge travels slowly; yet it is not a little surprising that nigh a decade should have elapsed from the announce-

ment by DR. MITCHELL of his plan of treating cases of nervous prostration, to its discussion and adoption in Germany, the land of "cures." In England, DR. PLAYFAIR has used it with striking success. His little monograph has been widely read, and has recently been translated into German. One of the last lectures in Volkmann's series also deals with the subject, so that our German brethren have now before them the full details of the plan.

In the *Deutsche medicinische Wochenschrift*, No. 14, 1886, there is the report of a lecture on the "Weir Mitchell treatment," by PROFESSOR LEYDEN, of Berlin, who enters into the question at length, and gives an analysis of the well-known volume *Fat and Blood*, which he characterizes as written in the true Hippocratic spirit. He confirms the experience of Playfair and others, and has had extraordinary results in suitable cases. As the essence of the method, he regards the treatment of the patient in his entirety, not the disease alone. Undoubtedly, the secret of the remarkable success which has attended this plan in the hands of its author is to be sought in the careful consideration which is given to every circumstance in the life and condition of the individual. As Leyden remarks, "the physician must know man and his surroundings; he must be able to judge of the conditions under which the patient lives; he must seek out the causes in which the disease has developed, and gather from them indications of the means to be adopted for its removal."

#### SYPHILITIC REINFECTION.

THE question of the possibility of two attacks of syphilis occurring in the same individual has been vigorously discussed for some four centuries. Ricord has affirmed that a person once attacked with syphilis is never entirely freed from the disease. Bärensprung is of a similar opinion, maintaining that in this disease there is acquired an immunity from reinfection analogous to that observed in the exanthematous diseases. Sigmund absolutely denies the possibility of reinfection, while Zeissl claims to have several times observed the reacquisition of the disease a few years after the first attack.

At the January session of the Society of Physicians of Vienna, NEUMANN presented a patient who was a marked example of reinfection. In November, 1883, she had come to his clinic with large condylomata and a general swelling of the lymphatic glands. After appropriate treatment she was discharged, cured. Early in 1886 she again arrived for treatment, with a syphilitic lesion of a labium majus, an indurated chancre, and several days thereafter appeared fever and a macular syphilitic eruption. Apart from the comparative rarity of authentic cases of syphilitic reinfection, their chief interest lies in

the fact that they afford conclusive proof that the syphilitic taint may be completely and absolutely eradicated.

### SPECIAL ARTICLE.

#### PROPHYLAXIS OF HYDROPHOBIA.

IN our issue of last week, page 450, we reproduced M. Pasteur's communication to the Académie des Sciences on the "Prevention of Hydrophobia by Inoculation." Since the date of that communication three of the Russians suffering from wolf-bite, who were then under treatment, have died, and M. Pasteur has felt called upon to make a supplemental statement at the session of the Académie on the 12th of April, a report of which appears in the *Gazette Hebdomadaire* of April 16th.

He said that there had been treated, under his supervision, 726 individuals bitten by rabid animals. Up to the first of March last, the number of patients so treated was 350.

Of these 726 persons, 688 had been bitten by rabid dogs and 38 by rabid wolves. The two groups should be kept separate, in order to judge fairly of the method. With the exception of the little girl Pelletier, every one of the 688 persons suffering from the bites of rabid dogs was in good condition, despite the fact that more than half of those cases had passed the dangerous period.

Of the 38 Russians who had been treated, or who are still under treatment, 3 have died of rabies; but it is impossible to predict what may happen later. In Russia it is proverbial that any one bitten by a mad wolf is irrevocably lost, yet of the 19 Russians from Smolensk, whose treatment is terminated, 16 have returned to their homes apparently out of danger.

The observed facts have demonstrated:

1. That the period of incubation of human rabies after inoculation by the bite of a rabid wolf is much shorter than after the bite of a mad dog.

2. That the mortality resulting from the bites of rabid wolves is greater than in the case of bites of dogs similarly affected. This is apparently due to the location and great depth and extent of the wolf-bite. Inoculations made in dogs, rabbits, and guinea-pigs, with the spinal cord of the Russian who first succumbed, showed that the virus in this case was apparently no more virulent than that of rabid dogs.

In all instances, however, and especially in the case of wolf-bite, it is desirable that the patient should submit himself to the preventive treatment at the earliest possible moment. Thus, the 19 Russians from Smolensk did not arrive for treatment till the fourteenth or fifteenth day after that on which they were bitten, whereas, according to M. Pasteur, the treatment should have begun a week earlier.

M. Pasteur stated, further, that he is at present prosecuting experiments with a view so to modify his process as to render it, if possible, more applicable to cases of bites of rabid wolves.



## SOCIETY PROCEEDINGS.

## CINCINNATI ACADEMY OF MEDICINE.

*Stated Meeting, April 12, 1886.*THE PRESIDENT, JAMES T. WHITTAKER, M.D.,  
IN THE CHAIR

DR. W. H. WENNING read a paper on

INDICATIONS AND CONTRAINDICATIONS FOR THE IMMEDIATE SUTURE IN OBSTETRIC LACERATIONS OF THE PERINEUM.

(See page 483.)

DR. C. D. PALMER, in opening the discussion, said that he had listened to the paper with interest and profit. The subject presented was an old one, yet in view of some recent expressions of opinion, it was perfectly proper that it should be discussed again. As remarked by the essayist, the time was, and not a great many years since, when all these injuries were left to nature's efforts. But the recognition and appreciation of the ill results from such a course of conduct created a revulsion which went on and on, until universally, and almost unanimously, it was considered the duty of the accoucheur to make use of the primary suture.

If one will for a moment contrast the disadvantages of a non-use of the primary suture with the benefits to be derived, or ill results prevented by its use, it would seem that there would be no hesitation in always employing it. First, then, what are the disadvantages arising from non-interference? These are immediate and remote. Among the first are an open, raw sore, which rarely heals. It is true a few bad rents do spontaneously heal by primary intention. A vast majority will not, or only imperfectly, and this is true, notwithstanding that nature is aided by posture and cleanliness. Nature very often does something toward an improvement, but the work done is incomplete. Now, this open surface, before granulation, is one exceedingly liable to take up septic matter from without and from the lochia, hence increased chances for septicæmia, which possibly may be fatal.

Again, the torn perineum and vagina, healing imperfectly only by granulation, often a septic wound, leads to vaginitis and delays vaginal involution. The open wound is a source of pain and irritation.

The remote effects are: A subinvolved vagina, a gaping vulvar orifice, secondary vaginitis, vaginal prolapse, cystocele, rectocele, and in some cases, according to the time and degree of the injury, uterine dislocation—finally, derangement of the general health. All of these conditions may, and do often follow one after another, as a direct result of perineal laceration not deeper than to the sphincter ani. When the sphincter ani is torn we have, in addition to the above, special rectal symptoms. All of the local and general symptoms follow in the train of those local difficulties; first, because of a slowly healing, open, septic wound; and, second, because the position, relation, and structure of the parts have been altered and distorted. They are all preventable by a simple procedure, the execution of which, properly done, secures all the benefits of a restored perineum. The procedure is easily and quickly executed, requires no more than ordinary skill, demands no anæsthetic, and although not pain-

less, is not as painful as it would be in the non-parturient woman without anæsthesia. It is entirely devoid of danger under almost every possible condition; in fact, does away with an active factor of danger. Finally, it is, under ordinary condition of the parts, almost uniformly successful, and under extraordinary conditions of the region in question, as marked swelling, œdema, lividity, and raggedness, it is unsuccessful in a comparatively small percentage of cases.

The danger which is first, and the serious and long-continued discomfort which comes last, from a non-use of the suture, are certainly in marked contrast with the safety at first and comfort obtained at last, secured by its use. There is no more reason why a lacerated, gaping wound of the perineum should be left to nature alone than any similar wound of any part of the body. The greater the wound the greater the need for the suture.

The argument is so strong, yes, irresistible, for the use of the primary suture, that the duty of the accoucheur now is imperative. If union fails to take place nothing is lost, as compared with the result of a non-interference. Probably something is gained, for the parts are put more at rest, more nearly approximated, and hence more union results.

Therefore, operate in all cases and in all conditions. There is no local condition which is a contraindication to the use of the primary suture in a laceration which amounts to anything.

As to the method of operation, Dr. Palmer said he had used all kinds of suture in this primary operation, as silver wire, catgut, silkworm, silk, and silk-floss, but he now prefers silver, pure, soft, and not too large in size. This suture is less septic than any, and the inconvenience of the outer ends can be obviated greatly by a soft rubber tube covering, both it and the wire being cut rather short. Success in the operation depends, above all things, upon the method of adjusting the suture so that perfect and thorough coaptation of the rent surfaces is secured. He did not believe in the use of *serre-fines*, except for the external ruptures. Placed externally they could not produce exact coaptation of the upper, inner, vaginal portion of the rent. A great many rents are as much, or more, vaginal than integumentary. Some are purely vaginal. A method of suture adjustment which was calculated to secure good results in the primary operation had been illustrated by Goodell. It had objections, however, for the secondary operation. It consisted in entering each suture from without through the integument of the left side and postero-lateral septum, making exit on the mucous membrane of the vagina, just above the upper edge of the torn mucous membrane. The circuit of this suture was completed by entering the mucous membrane at a point on the opposite side, corresponding to the exit of the first half, and coming out on the integument of the right. The whole rent is thus encircled; and not many sutures are needed, but enough ought to be used to bring all torn edges together. Failure to unite the edges of the vaginal rent would leave openings for the entrance of septic material, produce pocketing along the posterior wall, and weaken the pyramidal body. As some rents are largely or purely vaginal, the sutures may then, with better satisfaction, be placed transversely within the vagina, cut short, and the edges turned down. The skilful adjust-

ment of these requires the use of a Sims's speculum to hold up the anterior vaginal wall, while the patient is supine.

The speaker advised, in conclusion, that the primary suture should be used in all cases—not simply where the parts are in ordinary condition, but where they are very seriously torn and look bad. If failure should follow, little can be lost, but something is always gained.

DR. THADDEUS A. REAMY said that the only point in which he could at all differ from the essayist was in reference to the omission of the sutures in the slighter degrees of laceration. The author of the paper, as he understood him, had recommended that where the laceration is but slight, yet involving mucous and muscular tissue, extending but little beyond the fourchette, so-called, no operation need be employed, except for the purpose of keeping out sepsis, since a large number of such cases would heal primarily if left alone. To this the speaker could not consent. He knew of but one condition that would justify any one in not making the primary operation in any case where the injury extended beyond the fourchette, and that would be a condition of the patient which rendered an operation unsafe.

Goodell, in a paper published in the first volume of the *American Gynecological Transactions*, states that he thinks it may be a matter of doubt whether, when the septum is divided, it is best to make the primary operation, but strongly advocates it in other degrees. I know of no higher authority in this or in any other country than William Goodell. It is probable, however, I think, that by this time he has changed his position on this question, and now includes the severe degrees; or, if he has not, it is evidence to my mind that a great authority can be wrong.

Prof. Frank H. Hamilton, whose distinction as a surgeon entitles his statements to the highest consideration, in an able paper published in the *Medical Record* for June 20, 1885, condemns the immediate operation by any method in any case. Quoting from memory, I may not give the order of his argument, but will state the important points.

Objection 1st. Union by first intention cannot be secured, only union by granulation, which can often be obtained by position alone.

2. Immediate operation, in many cases, must be postponed for several hours because of retained placenta.

3. But few accoucheurs can at once determine the extent of laceration, and therefore many cases would needlessly be subjected to operation.

4. The patient is in no condition to bear an operation of importance, and which, under such circumstances, proves dangerous.

5. The operation is difficult, and the proper surgical skill may not be attainable in time to make the operation "immediate."

In a subsequent communication the same author quotes from the Vienna Hospital to prove that the dread of sepsis, if operation be neglected, which many accoucheurs entertain, is unwarranted.

In replying briefly to these objections, whilst agreeing with most modern authors, I shall speak from personal clinical observations obtained in private and hospital practice, including a large consultation experience.

1. I maintain that union by first intention, when the immediate operation is properly done, is the rule; failure the rare exception, even including cases involving the anal sphincter.

2. I would in no case leave a placenta undelivered for a sufficient time to forbid an immediate operation. In a case of adherent placenta the circumstances must be quite exceptional, which would delay delivery more than an hour or two. In retained placenta from other causes the time would not be increased, in proper hands. An operation for perineal repair should be considered "immediate" if done at the close of the third stage of labor. One or two hours' delay after the rent occurs will make no material difference in results. It is, however, preferable, and is my custom, to operate before the child is washed, before the patient has fully recovered from the anæsthetic (chloroform) under which it is my practice to deliver all primiparæ.

3. I should have but little respect for an accoucheur who could not, upon proper examination, determine the extent of laceration. There is no excuse for such ignorance.

4. The operation is in most cases neither painful, tedious, taxing to the patient's strength, nor dangerous. If the woman has suffered severe hemorrhage, or is otherwise in a state of exhaustion, of course the operation should be delayed until she is restored; but instances demanding much delay are quite exceptional, and these do not affect the general question at issue.

5. The immediate operation is not difficult, except in cases where the damage has been very extensive, involving sphincters and septum, or when the laceration is in unusual directions. It is so simple that no man who is not thoroughly competent to make it, without consultation, should assume the office of accoucheur. Of course, this strong language is not intended to apply to the management of the exceptionally severe cases already noted.

On the other hand, it is not my intention to limit it to the management of cases of the first and second degrees. Let no one who has had experience in the secondary operation and not in the primary (immediate), attempt to judge of this question from his experience. The remote operation, even in simple cases, requires for its perfect performance special skill which can only be acquired by experience. Not so, however, the immediate operation, where the parts are so relaxed that they can be brought into the proper relation without the least difficulty. No accoucheur should take charge of a primipara in labor without having in his pockets, or obstetric bag, the needle and needle-holder and silk necessary for the work.

The proposition that a woman who has in labor suffered more or less perineal laceration is not thereby in peril from sepsis, is so contrary to our present knowledge of the methods by which puerperal septicaemia is established, as to be absurd. Equally unreasonable is the position that the immediate repair of such an injury does not markedly lessen this danger.

So important do I consider this view of the question, that I should feel justified in the immediate operation if there were no other objects than prophylaxis from sepsis.

It is well known that the vaginal mucous membrane possesses slight absorbent properties, but when the

vaginal walls or perineum are lacerated, the rich plexuses of lymphatics found everywhere in the female pelvic organs enlarged at the close of gestation, and so especially abundant in the region of injury, are ready recipients for septic matter, which is speedily carried into the general circulation.

The damage from this source is not always fully measured when germs of special power mark the fatal progress of epidemic influence. A patient need not die to show the injuries of sepsis. Metritis, perimetritis, cellulitis, subinvolution, subacute or chronic invalidism in various forms may indicate the damage, all of which might possibly have been prevented by closing the exposed field.

Now as to the general question. No one well informed as to the immediate and remote evils of imperfect repair, whether spontaneous without treatment, or secured by posture alone, or by operation or otherwise, resulting to the subjects of even slight rupture, and generally increased in proportion to the extent of rupture, in graver cases, can for a moment question the wisdom or the humanity of adopting such measures as will best avert these evils.

Experience as well as science testifies that the most reliable means to such an end are found in the immediate operation, properly done.

The truth of the above statements is in no way impaired by the concession that spontaneous cure, and cure by posture, and by *serre-fines*, etc., will in a very limited number of cases be secured. The small number of such results, and the uncertainty in any individual case, must at once answer and condemn any such idle folding of hands and waiting for something to turn up.

We are gravely told, in this connection, that some women who have laceration of the external anal sphincter have nevertheless perfect control of feces except when suffering from diarrhea; and that other women who have unrepaired laceration of both sphincters, with, of course, total destruction of the so-called perineal body, do not suffer prolapsus of either uterus or bladder.

No one will deny the truth of these statements; but does not the woman's condition, in each case, show that she was not cured, and was therefore not successfully treated by chance or otherwise? And would any one present advocate a division of the anal sphincter as a measure of comfort, because a woman has been found with such an accident who could control her feces? Or would any one certify that a woman is in the best condition to participate in the physical pleasures of the marital relation because adhesions and other pathological conditions, following an unrepaired lacerated perineum and recto-vaginal fistula, have prevented uterine prolapsus?

**Methods of Operating. Suture.**—I have tried silver and iron wire, catgut, silkworm-gut, and silk. To the latter I have for some years given decided preference, except in cases hereafter to be mentioned. It is easier of introduction, easier and more accurately tied, and presents no jagged ends. If rendered aseptic no supuration will follow its course within the time it should remain—four to six days. In most cases union has occurred at the end of the fourth day; when it has occurred the sutures of whatever kind should be removed, since after union the sutures can only tend to lead the lochial fluids along their tract. It is a most fortunate

coincidence, and is a strong argument in favor of the immediate closure of these wounds, that the unhealthy and irritative properties which often characterize the lochial discharge, after the fourth day, are not present until after union has occurred. Catgut sutures cannot be depended upon. The silkworm-gut is so stiff, unless long soaked, as to render it difficult to tie, and equally difficult to regulate the tension.

**Instruments.**—A short, strong needle-holder, which may be carried in a pocket-case, a surgeon's needle, straight for two-thirds of its length, curved not too sharply at the point end, flat whole distance of curve, and very sharp at the point. The needle should be at least three inches long. An ordinary pocket-case scissors will answer for trimming ragged edges, a procedure seldom needed.

**Position of Patient.**—Buttocks at verge of the bed, lithotomy position, good light, an oilcloth must be placed so as to protect the bed. Perfect uterine contraction and expulsion of clots must be secured by friction, and maintained, if necessary, by ergot. The vagina must be thoroughly washed out with warm carbolized water. A small sponge must be placed at the mouth of the uterus and the washing of the vagina continued after the sponge is placed, until the parts are clean. After the sutures are all in, should any blood have escaped into the rent, the irrigation must again be done before the sutures are tied.

**Method of Introducing Sutures.**—Should the laceration only reach the second degree, but one suture is needed. This was pointed out in an article published in the January number, vol. xvii., of the *American Journal of Obstetrics*, by the late Dr. Alloway, of Montreal. I have in a number of instances verified the value of the so-called one-suture method. The left index finger being introduced into the rectum as a guide, the needle is inserted through the skin a little more than a fourth of an inch from the torn edge, just below the level of the fourchette, and carried across the rent, emerging at a corresponding point on the opposite side. Care must be taken that the needle does not enter the rectum, nor should it at any point puncture the mucous membrane of the vagina. In crossing the rent it should emerge and enter the rent walls, as nearly as possible, midway between the rectum and mucous membrane. The sutures should be tightened only sufficiently to close the surfaces. The temptation to make them too tight should be resisted. When the sphincter is partially divided, two sutures should be used, and they should be inserted and tightened after precisely the same rule as above. Should the sphincter be wholly divided, three sutures must be employed after the same method.

When the septum is extensively divided the upper portion should be closed as follows: Take a very fine short needle, almost a semicircle in shape, arm it with a very fine silk thread, and secure the needle in the small needle-forceps. Cleanse and dry the parts thoroughly. Bring the parts to view with the hips at the verge of the bed. Introduce the index finger of your left hand into the rectum, as before, and carry this little needle down into the tissues until you come to the rectum, but do not enter it; pass it under the rent and out on the other side. This procedure is to be repeated until a sufficient number of sutures has been introduced and the parts brought into perfect apposition, so that no



discharge can get between the edges of the wound. When you get to the perineum proper, operate on it in just the same manner as you would on a laceration of a less degree where the septum had not been divided.

Catgut suture for this operation upon the septum will answer fairly well, but I much prefer silk. The method of tying the sutures in the rectum in these cases I do not approve, because, first, it is difficult of performance; second, the sutures generally irritate the rectum; third, removal of sutures is difficult.

When the septum is not only divided, but contused at different points, with loss of tissue, as I have seen in a few instances, I use silver wire No. 28, carry them deeply, all from the outside, and as many as may be needed, and allow the ends to remain sufficiently long to be carried two inches beyond the vulvar opening. This prevents the jagging of cut ends, and also facilitates removal of the sutures. They must here remain from eight to twelve days. Union is, of course, generally by granulation, but excellent results may often be obtained even under such unpromising conditions.

In all cases, mild or simple, the bowels should be moved either by compound licorice powder or enema, before the sutures are removed.

Dr. Reamy then reviewed the anatomy of the perineum according to the investigations of Hart, as confirmed by Ranney, showing that the muscles of the perineum are not torn in rupture of that body, but are merely separated. On this account, it is not necessary to draw the sutures very tight, but only sufficiently so to bring the parts into apposition. After operation treat the patient with the same care as is observed by those who do not operate but depend upon posture. If you permit the patient to assume all postures, and allow the catheter to be introduced in a bungling sort of way, you will not get union. If there are ragged edges to the wound, it is better to cut them off, but if the tear is only zigzag, it matters not.

He then gave a few general suggestions and hints to young physicians as to the best methods of avoiding the censure which sometimes rests upon the accoucheur, of want of skill, as a cause of the accident. He believed that skilled attention would lessen the number of lacerations greatly, but the accident is unavoidable in certain cases, no matter in whose hands, and those who deny this either wilfully misrepresent the facts as to their practice, or are too negligent to examine their cases.

He thought that most cases of extensive laceration involving the rectovaginal septum, are due to the unskilful and violent use of the forceps. He had never been so unfortunate as to have the accident in this degree to occur in his own practice.

DR. J. H. TATE remarked that he had a method for treating these cases without even the use of a little stitch, and one in which he avoided the necessity of preparing the minds of the patient and her friends for a dreaded operation. His experience at the Cincinnati Hospital had afforded him abundant opportunity for testing the advantages of his method, as well as the frequency and extent of perineal lacerations. The accident is so frequent in primiparæ as to constitute fifty per cent. of all cases. The cases from which he obtained these statistics were in a public institution, where they were submitted to ocular and not simply

digital examination. There were at one time, in a period of four months, eighteen lacerations in his ward. Of these, four extended down to the sphincter ani. They were operated upon immediately. From the results obtained the speaker arrived at the conclusion, which he has since confirmed, that the primary operation should be made in all cases, except where the patient is in an unfit condition from loss of blood or other cause. The method upon which the speaker placed so much confidence in all cases where the sphincter is not torn, although not original to himself, was the use of strong serre-fines. To apply them, it is only necessary to turn the patient on her side, with the knees drawn up. From one to three or four serre-fines are usually sufficient. The speaker believed the results obtained from this method equal to those from any other method in use. Fourteen cases were cited, in twelve of which the operation was successful in the perfect restoration of the perineum. One of the failures was in a case in which the head had rested so long on the perineum as to produce a large slough on either side. Where the laceration extends up into the bowel, or even through the sphincter, stitches are necessary, although the serre-fines are of great value in coapting the edges of the wound. The chief advantages claimed for the method were its simplicity and convenience, as well as the satisfactory results which follow its use.

#### MEDICAL AND CHIRURGICAL FACULTY OF MARYLAND.

*Eighty-eighth Annual Meeting, held at Baltimore, April 27, 28, 29, and 30, 1886.*

(Specially reported for THE MEDICAL NEWS.)

TUESDAY, APRIL 27.—FIRST DAY.

THE eighty-eighth annual meeting of the Medical and Chirurgical Faculty of Maryland was held in the hall of the Faculty (Athenæum Building), on Tuesday, April 27, at 12 M. THE PRESIDENT, DR. JOHN R. QUINAN, of Baltimore, was in the Chair.

After preliminary business, the Faculty listened to

#### THE PRESIDENT'S ADDRESS,

the subject of which was: *The Chartered Right of the Medical and Chirurgical Faculty of Maryland to Exact Licenses to Practise in this State.*

He gave in brief the results of his examination of the legal records of this State, bearing on our right to regulate the practice of medicine within Maryland. If we possess, he said, the necessary legal power for such regulation, let us enforce it; if we do not, let us secure it. In 1795 the medical men of Maryland saw the necessity of protecting themselves and the people from quackery, and they earnestly called for the union of all the best professional elements of the State for this purpose. This Faculty was thereupon incorporated in 1798 under its existing charter. The preamble of this charter set forth the objects of its formation to be "The promotion and dissemination of medical and chirurgical knowledge throughout the State," and the "prevention of its citizens from risking their lives in the hands of ignorant practitioners or pretenders to the healing art."

By its fourth section the Faculty, through its Medical Board of Examiners, is given the power to grant licenses to such medical and chiralurgical gentlemen as they either upon full examination, or upon the production of diplomas from some respectable College, may judge adequate to commence the practice of the medical and chiralurgical art; "and it is further provided, that without such license no one shall practise or receive payment for his services under a penalty of fifty dollars for such offence, recoverable by presentment and indictment.

The charter thus granted was not an ordinary statute, repealable at the pleasure of the Legislature, but a solemn compact entered into with certain private individuals and their successors, by which the State guaranteed them certain corporate rights, powers, privileges, and franchises forever, unless forfeited by abuse or non-user. Did they do either? Has any court ever convicted them of abusing these powers? Have they ever voluntarily abandoned them?

The result of my examination of the statutes of Maryland, and the judicial decisions thereon, from 1798, is as follows:

The corporate members of the Faculty met at Annapolis, June 3, 1799, and organized and proceeded to grant licenses. By A. A. 1801, Ch. 35, they secured a supplementary act to enforce under penalties the same powers. In 1816, by Ch. 141, the censors were allowed to issue licenses to graduates who, by diplomas or examination, gave satisfactory proof of fitness. By A. A. 1818, Ch. 130, the provisions were extended to non-residents coming to practise in Maryland. By A. A. 1821, Ch. 217, persons not licensed were prohibited from suing or receiving compensation for professional services.

In 1838, by Ch. 28, the Legislature passed "An Act to authorize Thompsonians or Botanic Physicians to charge and receive Compensation for their Services and Medicines," while the body of the Act reads, "Be it enacted that after the passage of this Act, it may and shall be lawful for each and every person, being a citizen of this State, to charge and receive compensation for their services and medicines in the same manner as physicians are now permitted to do." This absurd Act violated the chartered rights of this Faculty, but the Thompsonians soon fell into disrepute, and this Act is now only remembered as a thing of the past. The Acts of 1861, Ch. 42, and 1862, Ch. 98, merely fixed the number of members necessary to call a meeting of the Faculty. With the exception, therefore, of the absurdity of 1838, no Act has been passed to impair the power of this Faculty to require licenses throughout the State.

The charters granted by the Legislature to the Medical College of Maryland and of the University, being subsequent to ours, could not legally impair the obligations of a prior contract with this Faculty. Besides, the said College and University sprang from this Faculty. The plan of the college received the approval of our second President, Dr. Philip Thomas, at the Convention of 1802, and by its charter (A. A. 1807, Ch. 53) the relations between it and this Faculty are made very close, and no interference was intended.

In the appeal of the Regents of the University, reported in 9 Gill & Johnson's Reports, page 365, the

court says: "The charter of the University has no express provision dispensing with the necessity of a license to practise from the Board of Medical Examiners (of this Faculty), nor authorizing graduates of such institution to practise without a license."

In conclusion, let me say that as our right to require licenses for all who desire to practise medicine and surgery in this State exists to-day in all its integrity, then I adjure you by your regard for our highest professional interests; by your regard for the honor, dignity, and moral elevation of your calling; by your regard for the lives and sanitary welfare of the community, boldly assert your vested right, and at once and forever clean out the Augean stable of charlatanism and quackery.

#### TREASURER'S REPORT.

DR. W. F. A. KEMP, Treasurer, reported the receipts for the past year as \$1628.29. During the same period nine new members were added.

#### EXECUTIVE COMMITTEE REPORT.

DR. THOMAS S. LATIMER, Chairman, reported that, in accordance with a resolution passed by the Faculty at its last annual meeting, the hall and two rooms now occupied by the Society had been leased for a period of one year at \$600, and that the Faculty has made arrangements with the Librarian of the Surgeon-General's Office, in Washington, by which our members can have the use of its books, the Faculty being responsible for all loss or damage.

#### LIBRARY COMMITTEE REPORT.

DR. I. E. ATKINSON, Chairman, reported that the total number of volumes upon the shelves of the library was 5000, an increase of 830 over last year, many of which volumes were donated by members of the Faculty. 62 journals are now regularly received, of which 37 are American, 10 British, 7 German, 6 French, and 2 Swedish.

#### PUBLICATION COMMITTEE.

DR. G. LANE TANEYHILL, Chairman, reported that the cost of printing last year's *Transactions*, with 500 copies of the Annual Address, and 300 copies of the President's Address, had been \$306.71.

(To be continued.)

### NEW YORK SURGICAL SOCIETY.

*Stated Meeting, April 12, 1886.*

THE PRESIDENT, CHARLES MCBURNEY, M.D.,  
IN THE CHAIR.

DR. MARKOE read a paper on

ESOPHAGOTOMY FOR FOREIGN BODIES LODGED IN  
THE TUBE.

The following cases, neither of which has been published, formed the foundation of his remarks.

*Case I.*—Harriet Jones, æt. three years, while playing with some iron jacks, such as children now use in place of the old-fashioned jackstones, got one of them into her mouth, and swallowed it. The alarm was immediately given by her sister who was playing with her, and when the mother ran to her, she seemed to be choking. The mother put her finger back into the fauces and distinctly felt the foreign body, but only suc-

ceeded in pushing it farther down and out of her reach. A doctor in the neighborhood saw her within a few minutes, and passed a probang, which he thought had gone down to the stomach. He gave the child a powder which had the effect of making her vomit, and the vomiting continued during the whole night. This occurred on Sunday, April 25, 1875. The next day she seemed sick and prostrated, and would not willingly take food, evidently on account of pain in the act of swallowing. She was able to swallow liquids, but bread or other solids would go down for a certain distance, and then be rejected. There was a little cough, no dyspnoea, and no evidence that the child felt any local pain.

This continued till Thursday, the 29th, when I first saw her, she in the mean time being constantly up in the mother's arms, very weak, and most of the time with high fever. I examined the fauces with my finger, the patient being under the influence of ether, but could not reach any foreign body, nor could I discover any swelling or abnormal condition of the parts within my reach. Careful exploration of the neck externally did not reveal any tumefaction, or any other indication of the presence of the intruder. I then passed into the œsophagus a large leaden probe, which struck a metallic body after it had passed about five inches. I estimated its position to be a little below the cricoid cartilage, but renewed external palpation failed to reveal its presence. I then passed down a pair of long curved forceps, with which I could easily touch the jack, but after repeated efforts with instruments of varied form and size, I could not succeed in getting a hold on it. Although as gentle as possible in all our manipulations, a small quantity of bloody mucus showed me that some damage was being done to the mucous membrane, and I desisted after trying a large bougie with which I thought I might push the foreign body down into the stomach. In this, however, I did not succeed, the instrument only passing, as before, about five inches, and being there firmly arrested.

The next day, Friday the 30th, having provided myself with other appliances, and having asked Dr. George A. Peters, Dr. T. T. Sabin, and Dr. McBurney, to assist me, we all met with Dr. Ranney, in whose care the case originally was, and the manipulations of the day before were repeated and varied in every way, without any success in dislodging the piece of iron. It could easily be touched, and several times was fairly seized by the forceps, but they could not be made to keep their hold. Fearing that further attempts would only increase local mischief, on consultation we decided to proceed at once to œsophagotomy, for which we had the consent of the parents.

An incision was made about midway between the trachea and the sterno-mastoid muscle, commencing opposite the middle of the thyroid cartilage, and extending to within less than an inch of the top of the sternum. Passing down between the sterno-mastoid and sterno-hyoid muscles, and pushing the omo-hyoid outward, we came down to the level of the carotid sheath, which was also pushed outward, and from this point the dissection was mainly conducted by the handle of the scalpel. Carefully displacing the loose connective tissue, we came down upon the side of the œsophagus, along which could be distinctly seen the inferior laryn-

geal nerve, at this point giving off a considerable lateral branch to the trachea. This nerve was carefully pushed forward, and it was noticed that every time it was pressed upon by the finger, or the curved spatula, the child showed signs of marked laryngeal distress. One of the pairs of long curved forceps we had been using was then passed down closed into the œsophagus, and by it the œsophagus was brought into relief in the wound. A longitudinal incision, of about three-quarters of an inch, was then made, opening into the tube, bringing its cavity very distinctly into view. Drawing the lips of the œsophageal opening well apart, the position of the foreign body was plainly revealed. One opening had been made, of course, on the left side. Opposite to the opening, therefore, on the right wall of the tube, was seen one limb of the jack projecting into the tube, while the main body of the jack was entirely outside of the tube, which it must, therefore, have perforated from within outward. How this irregularly shaped body could have traversed the wall of the œsophagus, whether forced through by muscular contraction tending to close the tube upon it, or whether it was pushed through by the sponge probang, or by the repeated handlings of it with the forceps, could not now be ascertained; the fact was plainly visible to all. That it was pushed through by mechanical force, and not by a process of ulceration, seemed evident from its being surrounded and hugged by sound tissues so closely that I had to cut a part of the œsophageal wall, in order to get the body back into the tube, and that there was no indication of inflammation, ulceration, or suppuration in the nidus from which it was removed. By making this incision, and thereby releasing one of the buried iron points, the whole was easily rolled out of its bed and removed. It was evident that the body of the jack must have lain outside of the œsophageal tube, and between it and the carotid sheath, upon which it must have already begun to press.

The wound was brought together in its upper three quarters by fine silk sutures, the lower fourth being left opened. Into this open portion of the wound a silk tent was inserted for drainage. No attempt was made to close the wounds of the œsophagus. No vessel had been wounded which required a ligature. The wound was dressed lightly; but, of course, without antiseptic precautions, which were then but imperfectly understood. The parents were directed not to allow the child to swallow anything, and an enema of beef-tea or milk was ordered to be given every three hours. We were informed that from the very first the child had been averse to swallowing anything, and in consequence had grown very thin and feeble.

*May 1.* Passed a restless night, without sleep. Enemata retained only for about an hour. Ordered three drops of laudanum with each.

*2d.* Great thirst; emaciation very evident, very feeble; wound looks well; no trouble about throat; no swelling of neck.

*4th.* Has been allowed to swallow water freely. It seems to give comfort, though it all comes out of wound, as ascertained by measurement. She swallows easily. Stitches all removed; the wound gapes freely. Enemata are retained longer by the help of the laudanum. She is losing flesh rapidly. No cough, and respiration easy.

*8th.* Seems to be nourished very imperfectly by the



enemata, though they are given faithfully. The wound does not granulate; all adhesions have broken up, and it seems to be incapable of reparative action. Some little milk is found by measurement to go down to the stomach, but only a trifling quantity. Some bronchitis from constant wetting of the chest. Thirst not so great; very restless and sleepless.

10th. Enemata have been given by the long tube and in larger quantity, with a little brandy. She looks a little better, and her pulse is stronger. A patch of erysipelas showed itself on the nose. Ordered the patch to be painted with tinct. ferri mur., and to add one grain of quinine to each injection, which are now pretty well retained.

11th. Seems brighter, but erysipelas has spread on the forehead. She retains the enemata, but she is poorly nourished. I have abstained from passing a tube through the œsophagus, on account of its very damaged condition. Beside the wound made in opening the tube on the left side, there is another large opening on the right side made for the extrication of the foreign body; and there is also, without doubt, much laceration of the mucous membrane caused by our persistent efforts at seizing it with the forceps. I fear that the passage of an instrument from the mouth might do much mischief, and might increase future trouble, should the patient recover. The pulse is much better. No reparative action in the wound.

12th. A sudden change took place after my visit yesterday. The child seems now dying of mere inanition, though the enemata are given regularly, and are mostly well retained. I immediately introduced a tube into the stomach, and threw in four ounces of warm milk punch. It was too late; the child rallied for a little time, and died about three hours after.

Case II.—Richard Ghent, aged twenty-four, a painter by trade, was admitted to the New York Hospital January 22, 1886. About five weeks before admission, while eating supper, a plate containing four artificial teeth broke in his mouth, and the palate portion was swallowed. He made attempts immediately to vomit, and tried to dislodge the plate but did not succeed. He says that several surgeons have made attempts to remove the plate, but have not succeeded. The patient is a man in fair condition of health and vigor, and does not seem to have suffered materially from failure of nutrition. This is due to the fact that though he has not been able to swallow solid food, he has been able to swallow fluid with comparative comfort. He says he can feel distinctly the spot where the foreign body has lodged, and indicates a point just below the larynx, but says it gives him no pain, nor is there any tenderness to be discovered in the region where he says he feels it. A large No. 10 œsophagus tube detects an obstruction just below the cricoid cartilage, about eight inches from the teeth; a small one, No. 4, passed easily into the stomach.

January 29. Attempts were made to remove the plate, and it was found not difficult to seize it with the coin-catcher; but when seized, it was found so immovably fixed, that the force that we thought it safe to employ did not change its position in the least. A large stomach-pump tube was then passed down to the foreign body, and an attempt made to force it downward into the stomach, with the same result. From the

long time which had elapsed since the time of lodgment, and from the fixedness of the body, I felt quite sure that it had partly ulcerated its way out of the tube, and that therefore any undue force in extraction would, while unavailing, prove disastrous to the œsophagus, and to the parts around. Reasoning thus, we recommended that another attempt should be made under ether, and, that if not successful, that œsophagotomy should be performed.

February 9. The patient was placed fully under the influence of ether, and again the foreign body was seized with the coin-catcher, but the complete relaxation produced by the anæsthetic had not loosened in the slightest degree the grasp of the œsophagus, and the operation was proceeded with. An incision four and a half inches in length was made, extending from the top of the thyroid cartilage nearly to the clavicle, along the inner border of the sterno-mastoid muscle, passing obliquely so that the upper end of the incision was half an inch internal to the edge of the muscle, while the lower end overlapped it nearly as much. The omohyoid was divided, and then passing down between the sterno-mastoid and sterno-hyoid muscles, and pushing the thyroid body inward, the side of the œsophagus was easily reached by separating the loose areolar textures with the fingers and the handle of the scalpel. The recurrent laryngeal nerve was not seen, and no vessel of a size requiring ligature was cut. The œsophagus was now made to bulge into the wound by passing the large stomach-pump tube down to the point of obstruction, and then pressing with the fingers deeply on the right side of the trachea. This brought the side of the œsophagus fully into view, and enabled us very easily to make a longitudinal incision into it about an inch long, opening the tube just above the point of lodgment and bringing into view the foreign body, which was seen to occupy a position parallel with the axis of the œsophagus, and about at a right angle to the median plane of the body. It was seized with a dressing forceps, but was found as immovable as ever. It was not till the incision was prolonged downward, so as to cut through the œsophageal wall which embraced the plate so firmly, that the plate could be stirred from its bed. It was then easily removed.

It would naturally be expected that such firm impaction during so long a period would have been accompanied by some ulceration of the surfaces against which the foreign body had so long been pressing. A careful inspection with a good light enabled us to feel pretty sure that very slight abrasion of the surface had taken place, and that the reason why the plate was so firmly held was that the tube had contracted so firmly above the point of distention as to resist our efforts at dislodgment. A soft rubber tube was now introduced through the wound, and passed into the stomach, and there permitted to remain. Careful antiseptic dressings were applied, from which the tube, which had a funnel-shaped extremity, was allowed to project. It was extremely easy to pass fluids through this tube into the stomach, usually by merely pouring them slowly into the funnel, though occasionally it was necessary to force them through with the stomach-pump.

There was almost no inflammatory reaction after the operation. The temperature scarcely rose above 100°, and the wound behaved in a most satisfactory manner.

The tube gave no pain or uneasiness, and afforded the most comfortable possible means of alimentation. His general condition was well maintained, and his nutrition perfect. On the 19th, as the wound was granulating finely, and looking perfectly healthy and ready to heal, the tube was removed. Before it was taken out, however, a similar tube was introduced into the left nostril, and as the first tube was removed, the second was slipped by the wound into the stomach. This again proved an easy and comfortable way of feeding, the tube through the nose giving rise only to a little soreness in the meatus through which it passed, but not enough to call for treatment. This second tube was used with a view to prevent any matters getting out of the oesophageal wound in the act of deglutition into the yet unhealed fistulous track left by the removal of the original tube. It seemed to answer its purpose perfectly, the wound closing promptly and healing so well that on the 26th the nasal tube was removed, and the patient was allowed to swallow soft food without restriction. No further interruption to the healing occurred, and the patient was well by the 15th of March.

The operation of oesophagotomy, for the removal of impacted foreign bodies, is now one of universal acceptance. As a legitimate surgical resource, however, it was slow in achieving this position, and was received with much distrust and hesitation, till within a comparatively recent period. Mr. Arnott, Surgeon of the Middlesex Hospital, writing in 1883, says: "Incision of the oesophagus for the removal of a foreign body is an operation which has rarely been performed. It is stated to have been twice executed in France about a century ago, and once again lately, but I can find no record of its having been done in England."

Since the occasions for its performance must have been quite as frequent in former times as they are at present, it is not quite easy to explain the timidity of good, and otherwise bold, surgeons in regard to this operation. It seems likely that the depth of the incision in the neck necessary to reach the oesophagus, and the important organs among which that incision must pass, deterred surgeons from attempting oesophagotomy in cases when we should now consider it clearly indicated. Perhaps, also, the fact that the occasions for its performance were so rare that no one surgeon could ever hope to acquire a large experience in it. That this is true is seen by statistical tables, which show that out of eighty-two cases which have been collected up to date, only five men had more than two cases, and of these five only two had an experience embracing five cases. But, probably, the most potent reason for not doing oesophagotomy was found in the illusive hope that the foreign body would be spontaneously dislodged. This hope has been, I feel quite sure, encouraged by the frequency with which foreign bodies have been spontaneously expelled from the air-passages, after a lodgement of months and even years. Increasing experience has shown that the physical and vital conditions are not the same in the two sets of cases. In the air-passages we have an open tube, a column of air to act upon the foreign body, and all the power of the numerous and strong muscles engaged in the effort of forced expiration. If it were not for the spasmodic resistance of the glottis, every foreign body, not too firmly fixed by size, or shape, would be easily expelled through the larynx.

No such provision exists in the oesophagus, and if the intruder cannot be dislodged by forceps or probang, and cannot be pushed into the stomach, there seems to be almost no means, and therefore little hope, of spontaneous expulsion.

The consequences of such undisturbed lodgement are now understood to be disastrous in every case, and fatal in a frightfully large proportion. These consequences are familiar to us all, and are yearly illustrated by fatal cases published in the journals. One of these was related by Dr. W. T. Bull, at a recent meeting of the Society, in which a horse-chestnut, lodging near the cardiac extremity of the pylorus, had produced a perforation of the pleura, which was filled with a mixture of various ingesta in a state of decomposition, the lung itself being collapsed. Mr. Bryant quotes several cases: one, in which a fish-bone caused death by perforation of the heart; another, in which the aorta was eroded by a sharp spicule of bone; and another, in which fatal inflammation of the spinal cord was produced as a consequence of ulceration of the intervertebral substance following the arrest of a piece of bone in the oesophagus. Mr. Bryant also alludes to two cases reported by Mr. Erichsen, in one of which a piece of gutta-percha formed for itself a bed in the wall of the oesophagus for upward of six months, and destroyed life by ulceration into a large vessel, and consequent hemorrhage; and a second, in which a fatal result was brought about by a half-crown ulcerating its way into the aorta. One very interesting case occurred to Mr. Bennet May, showing how dangerous results may be apprehended long after the original impaction. It occurred in a child seven years old, from whom he removed, by oesophagotomy, a halfpenny which had been swallowed three years and a half before. It had ulcerated through the oesophagus, and opened the right bronchus, and was lying partly in the bronchus and partly in the oesophagus. Mr. May had the good fortune to save his patient. Many other fatal results of oesophageal impaction might be cited, but from the cursory glance I have been able to take of the literature of the subject, I feel quite sure that it would be difficult to find, among all the recorded cases, as many of spontaneous recovery as I have here given as fatal issues.

These considerations explain, at least in part, the slow progress of this operation in public favor, and at the same time they point out the indications for its performance. Thus it may be stated that where a foreign body has lodged in the oesophagus, and cannot be removed by forceps or snare from the mouth, and cannot be pushed into the stomach, it should be removed by oesophagotomy, provided it has lodged at a point accessible to the surgeon's knife, and that the operation should not be delayed in the hope of spontaneous expulsion. Of course, before proceeding to so serious an operation, the diagnosis should be certain, and this usually presents no difficulty. The history of the accident, the sensations of the patient, the behavior in regard to swallowing, and, above all, the positive evidence afforded by the bougie, usually leave no doubt in the mind of the surgeon both as to the fact of impaction, and of the precise spot at which it has occurred. It should be noted here that external palpation rarely gives any assistance in ascertaining the presence of a foreign body lodged in the oesophagus. The tube lies

so deep behind the trachea, and below all the muscles of the neck, that the hardest and most irregular substances lodged in it, can very rarely be appreciated by external examination. Of the operation itself, nothing needs to be said to this Society. The plan of it is simple, and the execution easy, requiring only delicacy and carefulness in its performance. It should be done on the left side, as the œsophagus inclines to that side, and it should be commenced by a very liberal incision, four or five inches in length, in order to give a chance to conduct the deeper manipulations, as far as possible, by the sense of sight.

It is more particularly to the management of the case after operation that I wish to direct attention. Various plans have been suggested by various operators, as to the two prime points which present themselves to the surgeon after he has completed his operation. First, the healing of the wound with the least risk of complication; and, secondly, nutrition of the patient, not merely with the view to sustain life, but also of maintaining reparative power at a point at which it will prove itself capable of healing a large, deep, and difficult wound. I feel that it was a failure, on my part, to appreciate the importance of this latter point, which caused the unfortunate result in my first case, and I determined, should another case be placed in my hands, that malnutrition should not cause its failure if it could be prevented. Of course, it is understood that swallowing of food, in the usual way, cannot be permitted, for the obvious reason that such swallowing would prevent the healing of the wounded gullet, would allow the escape of food in a more or less septic condition into the cavity of the wound outside, and thus inflammatory complications, of the most serious nature, would almost necessarily supervene. To maintain the nutrition of the patient then, either food must be transmitted to the stomach by tubes past the wounded point of the œsophagus, or else reliance must be had on rectal alimentation. Rectal alimentation, however, affords us only a limited resource in nutrition. Though it may serve us well during temporary interruption of gastric digestion from any cause, yet life cannot long be sustained by it, and when sustained, the nutritive conditions can rarely be kept up to the high reparative point necessary for the healing of a large operation wound. This view of the limitation of rectal alimentation has been growing stronger in my mind ever since my attention was called to the subject by the conspicuous failure to secure proper nutrition in the first case I have narrated; and I believe that I had fully appreciated just how little reliance was to be placed on it, my little patient might have been alive and well at this moment. It is true, in this case, the conditions were unfavorable for the passage of a tube through either the mouth or the wound. The extensively damaged œsophagus made it highly proper to avoid further injury, if it could in any way be avoided, and this must be the explanation, if not the justification, of the course pursued. But had I at that time had the same convictions I now entertain, with reference to rectal alimentation, I should, at all hazards, have passed a tube through either the mouth or the wound, and thus have secured that full reparative nutrition, without which, in my case, all repair broke up at the wound, erysipelas set in, and the patient sunk so rapidly that when a tube was intro-

duced, and plentiful nourishment was supplied, it came too late to save the life which I had been for so many days blindly trusting to a most unreliable supporter.

The management of the second case seems to me to present a much better prospect of success. Determined to secure gastric alimentation, the choice of means lay between introducing a tube through the mouth or wound, whenever it was necessary to give nourishment, or leaving a tube, passed the mouth or wound, constantly *in situ*, thus permitting nourishment being given whenever desired. I chose to leave the tube in the wound for several reasons. First, I thought that the tube would insure the drainage from the bottom of the deep wound; secondly, that it would tend to prevent the entrance of any matters regurgitated from the stomach; and, lastly, I was confident that the tube through the wound would be much less distressing to the patient than a similar tube passed through the mouth or the nostril. I entirely rejected the idea of the frequent introduction of the tube, because I felt convinced that such a procedure would not only seriously disturb the healing process, but would be such a dread and a trial to the patient, and such a tax on the surgeon, that the result would be that the tube would be introduced as rarely as possible, and when introduced the stomach would be distended with as much food as it would hold, in order to prevent the necessity of early repetition of the troublesome procedure, a condition of stomach by no means conducive to comfort, or to good digestion. In all these respects, the case answered my best expectations. The tube in the wound, coming out through the dressing, was always available for use, and small quantities of nourishing fluids were constantly supplied by the hands of the nurse without pain, trouble, or any overtaxing or distressing of the digestion; and regurgitation, which rarely occurred, took place through the tube without at any time appearing around or through the dressings. The wound was perfectly drained, and granulated healthfully from the beginning. The change to the nasal tube was made at the end of ten days, and this latter was kept in place for a week, to allow the wound to fill up solidly with granulations. The healing of the wound from this time was rapid and complete. The man is not now conscious of any impediment to the act of swallowing.

The results of the operation of œsophagotomy are encouraging. I am indebted to my friend Dr. S. W. Gross of Philadelphia, for the following statement which he very kindly gleaned for me from his abundant statistical resources. The whole number of persons operated upon up to date is 82. Of these cases, 63 were successful, and 19 followed by death. Of the 82 cases the foreign body was found and removed in 74, and of these, 57 recovered and 17 died. The foreign body was not found in 7 cases, and in one case it was found, but slipped into the stomach, and passed *per anum*. In one of Bull's cases, the foreign body slipped into the stomach, and was thence removed by gastrotomy, the patient dying of peritonitis. In this case, of course, the fatal result should not be credited to the œsophageal operation. Of the 16 fatal cases of œsophagotomy, 8 are stated to have died of abscess, provoked by the lodgement of the foreign body, 2 died of exhaustion, 2 of septicæmia, 1 of pneumonia, and



the rest not clearly stated. It would be interesting to know the relation of the death-rate to the time at which operation was performed after the impaction. I feel certain that delay is accountable for a very greatly increased death-rate.

In this connection it may be well to call attention to the evil effects of delay even in those cases where the foreign body can be dislodged without œsophagotomy. In these cases two causes contribute to make delay disastrous. First, the tendency of the foreign body, particularly if it is hard and rough, to make its way out of the tube by ulceration, as illustrated by the first case here reported; and, secondly, by the contraction of the circular fibres of the œsophagus round the intruder, as described in the second case. Both of these causes are cumulative in their action, and delay, therefore, must be constantly rendering both of them more and more efficient for mischief. A gold plate which to-day can be removed with comparative ease, has by to-morrow so buried its sharp points into the mucous membrane, or is so firmly grasped by muscular contraction, that œsophagotomy has become the only resource; and the horse chestnut, as in Dr. Bull's case, which, on the day on which it was swallowed, might easily have been pushed into the stomach, gave infinite trouble when attempts were made several days after to dislodge it and finally caused the death of the patient.

From these considerations, I would deduce the surgical rule to attempt the removal of foreign bodies impacted in the œsophagus as soon as proper instruments can be procured, and failing after a fair and sufficient trial, to proceed at once to the operation of œsophagotomy.

DR. ROBERT ABBE thought an attempt should always be made with considerable hope of dislodging the foreign body under ether. The past winter he saw a woman twelve days after she had swallowed a plate with one tooth, which had lodged two inches below the cricoid. A great many attempts had been made for a week by two or three surgeons to remove it, but without success. Dr. Abbe was able to get the coin-catcher behind the foreign body, but with all the force which he dared exert he failed to dislodge it. The patient was then put under the influence of ether, which so relaxed the œsophageal structures that, with less force than he had previously exerted, he was enabled to remove the plate.

It seemed to him, also, that the œsophageal wound might safely be closed, and the tube be introduced, protruding from the mouth from the first. This fact was demonstrated in some cases recently reported in British journals, in which the patient tolerated the tube for a number of days with comparative comfort.

DR. MARKOE said he had not seen the reports referred to by Dr. Abbe, but he knew of some cases in which that practice had been adopted, and the objection to it was that the tube caused a great deal of faucial irritation, and it was abandoned. But in his own case the tube being introduced through the wound gave such comfort that he would not think of trying any other method.

DR. A. G. GERSTER wished to add his testimony to the advantages of the continuous use of the elastic tube for alimentary purposes, as illustrated in three cases. Two were cases of partial extirpation of the larynx, in one of which the tube was left in for twelve days, and

in the other for fourteen days. In one the tube projected through the wound made by removing one-half of the larynx, and was borne so well, and enabled alimentation to be carried to such an extent, that the patient increased very rapidly in weight. In the third case, in which the entire tongue and floor of the mouth down to the epiglottis and middle portion of the inferior maxilla were removed, and deglutition was out of the question, the tube was still in (the sixteenth day after the operation), and alimentation was kept up with a great deal of comfort to the patient. In this case a strong fillet of silk was passed through the stump of the tongue, in order that the subsequent introduction of the tube might be facilitated by pulling the stump forward; but when the tube was removed on the fifth day, and an attempt was made to feed the patient in the afternoon, it caused so much disgust and excitement that the tube was replaced, and food was introduced as before. He was anxious to remove the tube, as it was one of English make, hard and webbed, and was liable, by pressure of the calcareous tracheal rings, to produce a sore. But such an effect did not take place. The tube was removed once in three or four days for purposes of cleansing and replacing it by a new one, if it had become rough. By nourishing the patient through the œsophageal tube they had been enabled to carry him through an attack of catarrhal pneumonia, which developed the third day after the operation.

DR. F. LANGE performed œsophagotomy last summer at the German Hospital upon a man about forty years of age, who had swallowed a plate with several teeth some time before admission, but exactly how long he could not recall. Previous to admission some surgeons had made ineffectual attempts to withdraw the foreign body, which was situated near the entrance to the stomach. Dr. Lange failed under anæsthesia, and then performed œsophagotomy, thinking he would thus be enabled to get a safer grasp on the foreign body. He was, however, still unable to extract it, or to push it down, until finally it went down into the stomach under very slight pressure. The further fate of the foreign body was unknown; the man was discharged after some weeks cured, and had not been heard of since. With regard to the treatment of the wound, he closed the walls of the œsophagus by catgut, inserted only a few sutures in the external wound, leaving it partially open, and making free drainage. The man swallowed from the beginning, the first days receiving only small quantities of water and milk administered cautiously. First union took place, the wound closing quickly. Dr. Lange thought such treatment would be justified in cases in which the tissue at the œsophageal opening was healthy. He did not know that it would be proper if suppuration had taken place at the point of operative interference. In this case the treatment was quite satisfactory; no food appeared at the external wound.

DR. MARKOE said that success depended entirely upon closure of the œsophageal wound, and if this could be secured the method adopted by Dr. Lange was undoubtedly the best. But if union failed to take place at any point in the line of incision, septic material would be likely to enter it, especially during the act of swallowing food. More recent writers, he believed, are almost unanimous in the opinion that the wound should not be closed.

THE PRESIDENT remarked that in the case of the child whose history Dr. Markoe had related, it would have been unwise to close the œsophagus, and allow the child to swallow at once, as it would have forced the food into the lacerated tissue on the right side of the œsophagus.

DR. HUTCHISON thought that when it became necessary to introduce the œsophageal tube to nourish a patient it would be much more convenient to the surgeon and more comfortable to the patient to introduce it through the nose. Such had been his experience after extirpation of the tongue, and in other cases. He had observed the same difficulty referred to by the author of the paper when the tube was introduced through the mouth, namely, faucial irritation. He had employed the tube as long as fifteen days, taking it out now and then to cleanse it, and substituting a smooth one if it became roughened.

#### PERFORATION OF INTERNAL ILIAC VEIN BY FOREIGN BODY IN THE INTESTINE.

DR. L. A. STIMSON presented a portion of the large intestine and of the internal iliac vein, with the following history:

The patient, an Italian about twenty-five years old, was admitted to the Presbyterian Hospital, complaining of pain in the region of the left ilium. Some slight thickening could be felt in the left iliac fossa, and the left thigh could not be completely extended. He had continuous fever and, later, diarrhœa. After the lapse of two or three weeks, a large smooth fluctuating swelling appeared suddenly between the left trochanter and the crest of the ilium, which, on exploratory puncture, yielded only dark liquid blood. A few days later the swelling, which had spread a little beyond the posterior median line, was found to be remarkably resonant. It was opened, and discharged a large amount of offensive liquid feces mixed with blood. It was found that the feces had escaped through the upper part of the great sacro-sciatic notch. Three days later he died exhausted.

At the autopsy, a steel shawl or bonnet pin seven inches long with a black composition head one-quarter inch in diameter, was found in the descending colon; the head lay at the splenic flexure, and the point had traversed the posterior walls of the bowel and rested against the inner surface of the ilium. Two inches below this perforation was another one-half inch in diameter, also in the posterior wall of the bowel, and communicating with a large cavity occupying the adjoining part of the iliac fossa, extending over the line into the true pelvis, thence communicating with the fecal abscess into the buttock. In a search for the source of the bleeding, the common, external, and internal iliac arteries and veins were found to be uninjured, but in the anterior branch of the internal iliac vein was an ulcerated opening which established free communication between its interior and the cavity of the abscess.

No history could be obtained which threw any light upon the means by which, or the purpose for which, the pin had been introduced. It must, of course, have been introduced through the anus, and, after having worked its way up to the splenic flexure, had perforated the bowel and thus led to the formation of the fecal abscess.

The implication of the vein explained the sudden appearance upon the buttock of the swelling containing blood.

## NEWS ITEMS.

AMERICAN MEDICAL ASSOCIATION.—The Chairman of the Section on Practice of Medicine, Physiology, and Materia Medica, begs to call the attention of the members to the increased interest of the proceedings of this Section at the coming Convention.

Papers have been already promised by Drs. Wm. Pepper, of Philadelphia, on "Nitrate of Silver in Catarrhal Jaundice;" L. Bruner, of St. Louis, on "Essential Vertigo;" Chas. Warrington Earle, of Chicago, on "Pancreatic Anæmia;" Albert C. Haven, of Lake Forrest, Ill., on "The Etiology of Disease;" Jno. B. Elliott, of New Orleans, on "Fever;" F. H. Patten, of the Nat. Military Home of Dayton, Ohio, on "Pneumonia in the Old;" L. Duncan Bulkley, of New York, on "The Treatment of Felon without Incision;" Philip Zenner, of Cincinnati, on "The Diagnostic Value of the Patellar Tendon Reflex;" A. F. Pattee, of Boston, on "Potassium Chloride;" O. F. Schultz, of Mt. Vernon, Ind., "On Antipyretic Doses of Quinine in Typhoid Pneumonia;" Edward F. Wells, of Chicago, on "Pneumonia in Pregnancy;" and Frederick N. Huehn, of Rockland, Maine, on "Certain Hitherto Unnoticed Principles Aiding the Circulation of the Blood."

The session of May 6th, will be partly devoted to a demonstration with the Cabinet, by Dr. H. F. Williams, of New York, of the principles of "Pneumatic Differentiation," to be followed by a discussion to be opened by Dr. E. Fletcher Ingalls, of Chicago, and at some period of the Convention, date to be announced, Dr. Joseph Jones, of New Orleans, will give a *résumé* of "Sixteen Years' Practice in the Charity Hospital of New Orleans."

RESIGNATION OF DR. CURTIS.—Dr. Edward Curtis tendered his resignation as professor of materia medica to the faculty of the College of Physicians and Surgeons, of New York, on Wednesday. He had informed the faculty some time ago of his intention to resign at the end of this term, and as they had secured Dr. George L. Peabody to be his successor, his resignation was accepted. For fourteen years Dr. Curtis has been a professor in the College, and his work has been appreciated by students and faculty. His resignation was caused by the pressure of outside business. As medical director of the Equitable Life Assurance Society, the greater part of his time and attention is called away from his college duties. Dr. Peabody will assume his new duty in October.

JOURNALISTIC ENTERPRISE.—During the session of the American Medical Association at St. Louis, *The Weekly Medical Review* of that city will publish a daily issue with reports of the proceedings.

LAYING THE CORNER-STONE OF THE COLLEGE OF PHYSICIANS AND SURGEONS.—On Saturday, April 25, the corner-stone of the new building of the College of Physicians and Surgeons, of New York, was laid in the presence of a large and enthusiastic audience.

The new building, of which Mr. W. Wheeler Smith

is the architect, is on the north side of Fifty-ninth Street, between Ninth and Tenth Avenues, opposite Roosevelt Hospital, and extending back to Sixtieth Street. The frontage on Fifty-ninth is 140 feet, and on Sixtieth Street 96 feet. The whole depth of building from street to street is 182 feet. The Fifty-ninth Street portion of the building will have a cellar, and be four stories above the sidewalk, and the Sixtieth Street portion three stories above, and also with a cellar. The building will be 70 feet above the curb on Fifty-ninth Street. The main building, or that on Fifty-ninth Street, will contain on the first story offices for the Trustees, Secretary, and clerks, students' study, and conversation and coat rooms; the second story of this part of the building will contain a large anatomical museum and professors' and patients' rooms; the third story, the "Swift" museum, recitation- and demonstration-rooms, and physiological department. The fourth story will be entirely devoted to dissecting, with adjacent rooms, which are lighted from the roof by skylights of unusual size. The dissecting-room will have thirty-six tables, and, it is claimed, will be one of the finest rooms for the purpose in the world. The lecture-room will be in the intermediate room on first floor, 48 feet by 55 feet, and will seat 450 students, as will the amphitheatre, which is on the second floor of the building. The Sixtieth Street building, with its three floors, will be devoted to laboratory purposes, with the exception of the janitor's quarters, and will have a private entrance.

The buildings will be of Haverstraw brick, with terracotta trimmings, and various courses of granite distributed throughout. The Fifty-ninth Street or principal entrance will be commodious and handsomely finished. A bronze statue of Mr. Vanderbilt, by Mr. J. Q. A. Ward, will occupy a prominent place in the building. Arrangements have been made for perfect ventilation and heating. There will be four separate fans in the building and three sixty-horse power boilers in an external room at the easterly end of the structure.

**CHAIR OF ANATOMY IN THE JEFFERSON MEDICAL COLLEGE.**—At a meeting of the Board of Trustees of the Jefferson Medical College held April 26, 1886, Dr. William S. Forbes, Demonstrator of Anatomy in that School, was appointed to the Chair of Anatomy left vacant by the resignation of Dr. William H. Pancoast.

**REDUCED RATES TO ST. LOUIS.**—A special excursion rate has been made by the Pennsylvania Railroad for members of the medical profession desiring to attend the meeting of the American Medical Association, at St. Louis.

The entire expense from Philadelphia to St. Louis and return will be \$35. This includes railroad tickets, sleeper, and meals. Tickets good on any day or train, except on New York and Chicago Limited Express. No change of sleeping cars between Philadelphia and St. Louis. Orders for such tickets can be procured from Dr. S. Solis Cohen, Secretary of the Philadelphia County Medical Society, 1431 Walnut Street, between 4 and 6 p. m.

**THE USE OF CALF-LYMPH** for vaccination has been made compulsory in the Grand Duchy of Baden from March 1st.

**GEORGE N. POWERS, M.D.**, has been appointed to the Chair of Ophthalmology and Otology in the Medical Department of the University of California, to fill the vacancy occasioned by the recent death of Professor A. M. Wilder, of San Francisco.

**THE COUNCIL OF THE BRITISH MEDICAL ASSOCIATION ON THE DEATH OF DR. FLINT.**—At a meeting of the Association Council held in London, on April 14th, Dr. Foster, President of Council, reported the death of Dr. Austin Flint, who had consented to deliver the Address in Medicine at Brighton in August next. He was sure that every member of the Council would feel with him that, in this untimely removal of that distinguished American physician, the loss had been one which would not only be felt by the Association, as members of a common profession, but would also affect the medical profession throughout the civilized world. He moved, "That this Council has heard with sincere sorrow of the death of Dr. Austin Flint, of New York, and beg to express their sense of the great loss which the medical profession throughout the civilized world has sustained by his untimely death." Dr. Withers Moore, President-elect, seconded the motion in a few appropriate remarks, which was then carried.

**OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE UNITED STATES MARINE-HOSPITAL SERVICE, FOR THE WEEK ENDING APRIL 24, 1886.**

LONG, W. H., *Surgeon*.—Granted leave of absence for seven days, April 24, 1886.

BANKS, C. E., *Passed Assistant Surgeon*.—Granted leave of absence for ten days, April 20, 1886.

ARMSTRONG, S. T., *Passed Assistant Surgeon*.—Granted leave of absence for five days, April 20, 1886.

**OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM APRIL 20 TO APRIL 26, 1886.**

TAYLOR, M. K., *Major and Surgeon*.—Granted one month's leave of absence, on surgeon's certificate of disability, with permission to leave the limits of the Department.—*S. O. 39, Department of Missouri*, April 16, 1886.

GRAY, WM. W., *Captain and Assistant Surgeon*.—Ordered to Fort Maginnis, Montana Territory.—*S. O. 33, Department of Dakota*, April 16, 1886.

WOODRUFF, EZRA, *Captain and Assistant Surgeon*.—Ordered to Fort Missoula, Montana Territory.—*S. O. 33, Department of Dakota*, April 16, 1886.

ROBERTSON, REUBEN L., *First Lieutenant and Assistant Surgeon*.—Ordered for temporary duty at Fort Snelling, Minnesota.—*S. O. 33, Department of Dakota*, April 16, 1886.

**OFFICIAL LIST OF CHANGES IN THE MEDICAL CORPS OF THE NAVY, FOR THE WEEK ENDING APRIL 24, 1886.**

LOVERING, P. A., *Passed Assistant Surgeon*.—Ordered to Navy Yard, New York.

BIDDLE, CLEMENT, *Passed Assistant Surgeon*.—Detached from "Monocacy," ordered home, and wait orders.

AMES, H. E., *Passed Assistant Surgeon*.—Detached from Navy Yard, New York, and ordered to "Monocacy."

CRAWFORD, M. H., *Passed Assistant Surgeon*.—Ordered to Naval Hospital at Washington.

HORD, W. T., *Medical Director*, and SPEAR, J. C., *Medical Inspector*, Delegates to the American Medical Association, to be held at St. Louis on May 5, 1886.